

temizoda  
marketi.com

# Ürün Kataloğu

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## Biz Kimiz?

Temizoda Marketi, iş hayatına, 1995 senesinde, İstanbul'da, mekanik taahhüt ve anahtar teslimi temizoda sistemleri yapmak üzere kurulmuş olan İNŞEL Yapı ve Teknik Donatım Sistemleri Ltd. Şti. bünyesinde başlamıştır. Temizoda danışmanlığı, tasarımı, uygulaması, dokümantasyonu ve eğitimi üzerine uzmanlaşmış olan İNŞEL, uyguladığı projelerde anahtar teslimi hizmet vermeyi amaçladığı zaman, temizoda, steril alanlar ve kritik kontrollü alanlarda çalışan personellerin ihtiyaçlarını da karşılamayı hedeflemiştir.

2007 senesinden itibaren temsilcilikleri vasıtasıyla Temizoda, steril alanlar ve kritik kontrollü alanlardaki sarf malzeme teminini yapmaya başlayan İNŞEL, zaman içinde siz değerli müşterilerimiz açısından karışıklığa yol açmamak ve daha iyi hizmet vermek amacıyla bu bölümü bünyesinden ayırmış, Temizoda Marketi Laboratuvar Ürünleri A.Ş. 'nin kuruluşunu sağlamıştır.

Bugün Temizoda Marketi olarak sizlere en iyi hizmeti, en doğru şekilde verebilmek için teknolojiyi yakından takip ederken, profesyonel, deneyimli kadromuzla ürün seçiminden eğitimine kadar siz değerli müşterilerimizin yanındayız.

## Amacımız

Temizoda Marketi olarak siz değerli müşterilerimizi hijyenik alan ve Temizoda'larınızın kurulumundan itibaren daha en başından tanıyor ve ihtiyaçlarınızı biliyoruz. Doğru yerde doğru malzeme kullanmanın ne kadar önemli olduğunun bilincindeyiz ve sizlere en kaliteli ve doğru ürünleri en uygun çözümlerle tedarik etmek için her zaman yanınızdayız.

En yüksek teknolojideki ürünleri sizler için tedarik ediyor ve eğitiminden, satış sonrası kullanıcı desteğine kadar ihtiyacımız olan her yerde yanınızdayız.

Doğru ürün seçimi hiçbir zaman en ucuz olanı ya da en pahalısı olanı olmadığını biliyoruz ve bu noktada sizlere optimum fayda sağlayacak şekilde yardımcı oluyoruz.

## Neden Temizoda Marketi?

*Sizi tanıyor, ihtiyaçlarınızı biliyor ve en iyi şekilde yardımcı olmak için yanınızdayız.*

### Size Özel Çözüm



Temizoda Marketi olarak, öncelikle sizi tanımaya çalışıyoruz ve işinizi, süreçlerinizi, ihtiyaçlarınızı öğrenerek size uygun özel çözümler sunuyoruz.

### Profesyonel Kadro



Temizoda Marketi olarak, eğitilmiş ve deneyimli kadromuzla, sizlere her zaman yardımcı olmaktan memnuniyet ve gurur duyuyoruz.

### Doğru Ürün Seçimi



Temizoda ve kritik kontrollü alanlardaki en önemli konulardan biri de doğru ürün seçimidir. Temizoda Marketi olarak sizin talepleriniz ve hedefleriniz doğrultusunda işiniz için en doğru, kaliteli ve ekonomik ürünleri öneriyoruz.

### Ürün Yelpazesi



Kritik kontrollü alanlarda kullanılan malzemeler, çalıştığınız alanlar kadar özel ve önemlidir. Sizin için en uygun ürün her zaman en pahalısı ya da en ucuzu olmadığını ancak en kaliteli olması gerektiğini biliyoruz. Size optimum çözümü sunabilmek için Temizoda Marketi olarak ihtiyacınız olan ürünlerin farklı markalardaki alternatifleri ile beraber çeşitlendirerek size sunuyoruz.

### Dokümantasyon



Temizoda Marketi olarak, kritik kontrollü alanlarda kullandığınız tüm malzemelerin dokümantasyonunun önemini biliyoruz ve tüm dokümanları, sertifikalarını, analiz raporlarını eğer gerekiyorsa kurulum aşaması, uygulaması ve validasyonunda da gereken tüm dokümanları sizler için temin ediyoruz.

### Satış sonrası Ürün Desteği



Temizoda Marketi, size sadece bir ürün tedarikçisi olarak yaklaşmaz. Aynı zamanda satmış olduğu ürünlerin de arkasında durur ve herhangi bir sorun yaşadığınız zaman, onun giderilmesi için gereken tüm aksiyonları almaktan çekinmez.

Temsilciliğini yürütmekte olduğu firmaların da tam desteğini almadan ürün satışı gerçekleştirilmemektedir. Ürünler hakkında bir sorun oluştuğu zaman, sanki kendisi kullanıyormuşçasına konuya yaklaşır ve en kısa sürede giderilmesini sağlar. Böylece sizler de almış olduğunuz üründen maksimum verim elde etmiş olursunuz.

### Tek Elden Çözüm



Temizoda Marketi olarak, geniş ürün yelpazemizle size ihtiyacınız olan tüm ürünlerde yardımcı olmak isteriz. Eğer ihtiyacınız olan ürün kataloğumuzda görünmüyorsa bile yurtdışındaki partnerlerimizle beraber size aradığınız ürünü bulmaya çalışırız. Böylece size tek sorumlu olarak tek elden hizmet veririz.

### Eğitim



Temizoda Marketi sizlere sadece ürün tedariki yapmaz, çağımızın en büyük gerekliliklerinden biri olan eğitimi de sağlar. Kritik kontrollü alanlarda ürün ne kadar doğru olursa olsun, yanlış ya da bilinçsiz kullanım istenilmeyen sorunlara yol açabilir. Talep edilmesi durumunda, almış olduğunuz ürünlerde gereken eğitimi de gerek kendisi, gerek üretici firma vasıtasıyla sağlar.

## Temsilciliklerimiz

Temizoda, steril alan, laboratuvar ve diğer kritik kontrollü alanlarda kullanılan yardımcı ürünlerde, tüm dünyada kalitesini kanıtlamış ve köklü firmalar ile çalışarak sizlere en iyi ve doğru ürünü temin etmek için aşağıdaki temsilcilikleri yürütmekteyiz.



**Alma  
nya**

- Temizoda için yüksek kaliteli, sertifikalı kıyafetler, bezler ve sarf malzemeler.
- Temizoda için bezler, sabit yapışkan paspaslar, ve çeşitli sarf malzemeler.
- Temizoda için bezler, sabit yapışkan paspaslar, ve çeşitli sarf malzemeler.
- Temizodalar için yüksek kaliteli, sertifikalı temizlik arabaları ve mop sistemleri.
- Temizoda terlik ve ayakkabıları.
- Temizoda sandalyeleri.
- Temizoda havalandırma filtreleri.



**İngilt  
ere**

- Temizoda için yüksek kaliteli ve sertifikalı bezler ve swablar.
- Temizoda için dezenfektan, eldiven, bez ve diğer sarf malzemeler.



**İtalya**

- Sterilize edilebilir temizoda gözlükleri



**Kana  
da**

- Temizoda için yapışkan paspalar, defterler ve dikişli yada kesilmeye karşı dirençli eldivenler.



**Malez  
ya**

- Temizodalar ve laboratuvarlar için tamamen temizodalara yönelik üretilen yüksek kaliteli eldivenler.



**Amer  
ika**

- Temizoda ve steril alanların dezenfekte edilebilmesi için gerekli sistem ve dezenfektanlar.
- Temizoda, ilaç fabrikaları, hastaneler ve diyaliz merkezleri için 100% endotoksin arındıran su filtreleri.
- Sterilizasyon Ürünleri

**Dastex Reinraumzubehör GmbH**

**IAB Reinraum-Produkte GmbH**

**Protect2Clean**

**PPS Pfennig Reinigungstechnik GmbH**

**ABEBA Spezialschuh-Ausstatter GmbH**

**Bimos – Interstuhl Büromöbel GmbH**

**Freudenberg Filtration Technologies**

**Berkshire Corporation**

**MicronClean Ltd**

**Univet**

**Purus International Inc.**

**Riverstone Resources**

**Marcor Cantel**

**Marcor Cantel**

**CrossTex**

**dastex**

[www.dastex.de](http://www.dastex.de)

**PPS**  
SPERMIUM PROFIT SYSTEM

[www.pps-pfennig.de](http://www.pps-pfennig.de)

**bimos**

[www.bimos.com](http://www.bimos.com)

**PROTECT  
2CLEAN**

[www.protect2clean.com/](http://www.protect2clean.com/)

**RS**  
RIVERSTONE RESOURCES

<http://www.riverstone.com.my>

**micronclean**  
QUALITY TECH. ENGINEERING TECHNOLOGY

<https://www.micronclean.com>

**IAB**  
Reinraum-Produkte GmbH

<http://www.iab-reinraumprodukte.de/>

**Berkshire**  
CORPORATION

[www.berkshire.com](http://www.berkshire.com)

**UNIVET**  
OPTICAL TECHNOLOGIES

<https://www.univetsafety.com/>

**Purus**  
INTERNATIONAL INC.

<http://www.purusint.com>

**CANTEL**

<http://www.mcipur.com/>

**CROSSTEX** INDUSTRIAL

<http://www.sterilizationproducts.com>





## Ürün Portföyümüz

### ➤ Temizoda Kıyafetleri

- Tulumlar (Yıkanebilir/Atılabilir & Steril/Non-Steril)
- Önlükler (Yıkanebilir/Atılabilir & Steril/Non-Steril)
- Boneler (Yıkanebilir/Atılabilir & Steril/Non-Steril)
- Şapkalar (Yıkanebilir)
- Başlıklar (Yıkanebilir/Atılabilir & Steril/Non-Steril)
- Galoşlar (Yıkanebilir/Atılabilir & Steril/Non-Steril)
- Maskeler (Yıkanebilir/Atılabilir & Steril/Non-Steril)
- Ayakkabılar

### ➤ Temizoda Eldivenleri

- Steril Eldivenler (Lateks & Nitril)
- Non-Steril Eldivenler (Lateks, Nitril, Polyethilen, Vinyl)
- Parmak Eldivenleri (Lateks & Nitril)
- Tekstil Eldivenleri

### ➤ Temizoda Bezleri

- Steril Bezler
- Kuru Bezler
- Islatılmış Bezler
- Süngerler

### ➤ Swablar

### ➤ Temizoda Matları ve Zemin Kaplamaları

- Yapışkan Defter Paspaslar
- Sabit Yapışkan Paspaslar

### ➤ Temizoda Kırtasiye Ürünleri

- Defterler (Çizgili, Kareli, A4, A5)
- Kağıtlar (A3, A4, A5)
- Kalemler (Steril & Non-Steril, IPA Resist.)
- Dosyalar
- Yapışkan Bantlar

### ➤ Temizoda Temizlik Sistemleri

- Moplar (Mop Bezleri)
- Mop Sistemleri (Kova Sistemleri)
- Mop Başlıkları
- Vakumlu Temizlik Ekipmanları
- İzolatör Temizlik Ekipmanları

### ➤ Temizoda Dezenfeksiyonu

- Dezenfeksiyon Sistemleri (Islak – Kuru)
- Dezenfektanlar
- Dezenfeksiyon Hizmeti
- Kimyasallar

### ➤ Temizoda Gözlükleri

- Gözlükler (Otoklavlanabilir/Tek Kullanımlık & Steril/Non-Steril)

### ➤ Temizoda Filtreleri

- Temizoda HVAC Filtreleri
- Hepa Filtreler
- Su Sistemi Filtreleri (RO Sistemi)
- 100% Endotoksin arındırma Filtreleri
- Çapraz İşlem Filtreleri

### ➤ Temizoda Mobilyaları

- Masa
- Dolap
- Sandalye
- Atlama Bankosu

### ➤ Temizoda Laminar Akım Üniteleri

### ➤ Hava Duşları

### ➤ İzolatörler

### ➤ Dezenfeksiyon Ölçüm Ürünleri

- Buhar, Etilen oksit, Gama, VH2O2, Formaldehit, Klor dioksit ve ısı izlemesi için;
  - Biyolojik İndikatörler
  - Kimyasala İndikatörler
  - Poşetler
  - Bantlar
  - İnkübatörler



## GENEL ÜRÜN KATALOĞU

## COVERALL

### Standard design:

- ▶ double covered zipper in the front
- ▶ adjustable inside waistband
- ▶ stand-up collar with push buttons
- ▶ raglan arm shape
- ▶ press buttons at arms and legs

### Optional accessories (see also chapter 2.6):

- ▶ knitted cuffs at arms and/or legs
  - simple knitted cuffs
  - knitted cuffs with internal filter (see also chapter 2.7)
  - conductive knitted cuffs
- ▶ clip ribbon plain or lettered
- ▶ chest, hip or bottom pockets
- ▶ pen, mobile phone or identity card loops
- ▶ individual coding
- ▶ company logos

### Further options on request.

Technical data are available in chapters 1.4/1.5  
and fabric samples in chapter 1.5.



table of cleanroom classes  
see chapter 2.22

Fabric	Colours	Art.-No.
ION-NOSTAT VI.2-WA	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1001
ION-NOSTAT I	<input type="checkbox"/> <input type="checkbox"/>	1101
ION-NOSTAT VI.2	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1701
ION-NOSTAT V	<input type="checkbox"/>	1801
ION-NOSTAT BS	<input type="checkbox"/> <input type="checkbox"/>	6001
ION-NOSTAT LS Light-125	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6101
ION-NOSTAT Plus	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6801
DASTAT-D	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6201
DASTAT-C	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6301
DASTAT-V	<input type="checkbox"/> <input type="checkbox"/>	6401
Sizes: EEES, EES, ES, S, M, L, EL, EEL (Special sizes on request) Size tables are shown in chapter 2.1		
<input type="checkbox"/> white <input type="checkbox"/> grey <input type="checkbox"/> light blue <input type="checkbox"/> light green <input type="checkbox"/> red <input type="checkbox"/> light grey <input type="checkbox"/> automotive grey <input type="checkbox"/> dark blue <input type="checkbox"/> olive green		



## COVERALL WITH INTEGRATED HOOD

### Standard design:

- ▶ double covered zipper in the front
- ▶ adjustable waistband inside
- ▶ press buttons at throat
- ▶ raglan arm shape
- ▶ press buttons on arms and legs
- ▶ open face
- ▶ flat top
- ▶ adjustable by press buttons at the back of hood

### Optional accessories:

- ▶ knitted cuffs at arms and/or legs
  - simple knitted cuffs
  - knitted cuffs with internal filter (see also chapter 2.7)
  - conductive knitted cuffs
- ▶ clip ribbon plain or lettered
- ▶ chest, hip or bottom pockets
- ▶ pen, mobile phone or identity card loops
- ▶ individual coding
- ▶ company logos
- ▶ buckle or Velcro as adjustment at the back of the hood
- ▶ high top (for longer hair)
- ▶ earmuffs with a choice of 2 alternative materials
- ▶ different fastening options for face-mask

### Further options on request.

Technical data are available in chapters 1.4/1.5  
and fabric samples in chapter 1.5.

Fabric	Colours	Art.-No.
ION-NOSTAT VI.2-WA	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1005
ION-NOSTAT I	<input type="checkbox"/> <input type="checkbox"/>	1105
ION-NOSTAT VI.2	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1705
ION-NOSTAT V	<input type="checkbox"/>	1805
ION-NOSTAT BS	<input type="checkbox"/> <input type="checkbox"/>	6005
ION-NOSTAT LS Light-125	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6105
ION-NOSTAT Plus	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6805
DASTAT-D	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6205
DASTAT-C	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6305
DASTAT-V	<input type="checkbox"/> <input type="checkbox"/>	6405
Sizes: EEES, EES, ES, S, M, L, EL, EEL (Special sizes on request)*		
<input type="checkbox"/> white <input type="checkbox"/> grey <input type="checkbox"/> light blue <input type="checkbox"/> light green <input type="checkbox"/> red <input type="checkbox"/> light grey <input type="checkbox"/> automotive grey <input type="checkbox"/> dark blue <input type="checkbox"/> olive green		



table of cleanroom classes  
see chapter 2.22



## COATS

### Standard design:

- ▶ press buttons in front
- ▶ stand-up collar with push button
- ▶ raglan arm shape
- ▶ press buttons at the arms
- ▶ extra long gown

### Optional accessories:

- ▶ knitted cuffs at arms
  - simple knitted cuffs
  - knitted cuffs with internal filter (see also chapter 2.7)
  - conductive knitted cuffs
- ▶ double covered zipper in the front
- ▶ adjustable waistband inside
- ▶ clip ribbon plain or lettered
- ▶ chest or hip pockets
- ▶ pen, mobile phone or identity card loops
- ▶ individual coding
- ▶ company logos

### Further options on request.

Technical data are available in chapters 1.4/1.5  
and fabric samples in chapter 1.5.



table of cleanroom classes  
see chapter 2.22.

Fabric	Colours	Art.-No.		
ION-NOSTAT VI.2-WA	☐ ☐ ☐ ☐	1002		
ION-NOSTAT I	☐ ☐	1102		
ION-NOSTAT VI.2	☐ ☐ ☐ ☐ ☐ ☐	1702		
ION-NOSTAT V	☐	1802		
ION-NOSTAT BS	☐ ☐	6002		
ION-NOSTAT LS Light-125	☐ ☐ ☐ ☐ ☐	6102		
ION-NOSTAT Plus	☐ ☐ ☐	6802		
DASTAT-D	☐ ☐ ☐	6202		
DASTAT-C	☐ ☐ ☐ ☐	6302		
DASTAT-V	☐ ☐	6402		
Sizes: EEES, EES, ES, S, M, L, EL, EEL (Special sizes on request)*				
☐ white	☐ grey	☐ light blue	☐ light green	☐ red
☐ light grey	☐ automotive grey	☐ dark blue	☐ olive green	

## JACKET AND TROUSER

### Standard design jacket:

- ▶ zipper in front, lateral displaced site
- ▶ stand-up collar with Velcro
- ▶ raglan arm shape
- ▶ push buttons at the arms

### Optional accessories jacket:

- ▶ knitted cuffs at arms
  - simple knitted cuffs
  - knitted cuffs with internal filter (see also chapter 2.7)
  - conductive knitted cuffs
- ▶ adjustable waistband inside
- ▶ clip ribbon plain or lettered
- ▶ chest or hip pockets
- ▶ pen, mobile phone or identity card loops
- ▶ individual coding
- ▶ company logos

### Standard design trouser:

- ▶ adjustable waistband
- ▶ press buttons at the legs

### Optional accessories trouser:

- ▶ knitted cuffs at legs (see jacket for design)
- ▶ pockets
- ▶ individual coding

**Further options on request. Technical data are available in chapters 1.4/1.5 and fabric samples in chapter 1.5.**

Fabric	Colours	Jacket Art.-No.	Trousers Art.-No.
ION-NOSTAT VI.2-WA	□ □ ■ ■	1003	1006
ION-NOSTAT I	□ □	1103	1106
ION-NOSTAT VI.2	□ □ ■ ■ ■ ■	1703	1706
ION-NOSTAT V	□	1803	1806
ION-NOSTAT BS	□ ■	6003	6006
ION-NOSTAT LS Light-125	□ □ ■ ■ ■	6103	6106
ION-NOSTAT Plus	□ ■ ■	6803	6806
DASTAT-D	□ □ ■	6203	6206
DASTAT-C	□ □ ■ ■	6303	6306
DASTAT-V	□ □	6403	6406

Sizes: EEES, EES, ES, S, M, L, EL, EEL (Special sizes on request)\*

□ white	■ grey	□ light blue	■ light green	■ red
■ light grey	■ automotive grey	■ dark blue	■ olive green	



Table of cleanroom classes see chapter 2.22

## OPTIONS

Fit the cleanroom garments to your individual requirements.

We would be pleased to assist you.



**Coloured printing**  
"Corporate Identity",  
e.g. with a company logo.



**Cuffs on the sleeves**  
The wristbands give the sleeves a perfect support.



**Open pockets**  
Great storage capacity  
with easy access.



**Pockets which can be closed**  
Storage place where nothing will easily fall out.



**Coding**  
A mix-up can be avoided thanks to individual codes.



**Pen pockets**  
Safe place for writing tools.



**Lettered clip ribbon**  
Visitor or employee?  
The printed clip ribbon makes it clear.



**Pen loops**  
Fast hold for pens.



**Tricot cuffs at the legs**  
Because of the cuffs the trouser ends fits perfectly.



## FULL COVER HOOD

### Standard design:

- ▶ spiral zipper front
- ▶ flat top
- ▶ adjustable by press buttons behind
- ▶ open face

### Optional accessories:

- ▶ high top for longer hair
- ▶ buckle or Velcro as adjustment at the back of the hood
- ▶ earmuffs with a choice of 2 alternative materials
- ▶ different fastening options for face-mask
- ▶ individual coding
- ▶ special fastening by ties to avoid displacing (under armpits)

### Further options on request.

Technical data are available in chapters 1.4/1.5  
and fabric samples in chapter 1.5.



table of cleanroom classes  
see chapter 2.22

Fabric	Colours	Art.-No.	
ION-NOSTAT VI.2-WA	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1020	
ION-NOSTAT I	<input type="checkbox"/> <input type="checkbox"/>	1120	
ION-NOSTAT VI.2	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1720	
ION-NOSTAT V	<input type="checkbox"/>	1820	
ION-NOSTAT BS	<input type="checkbox"/> <input type="checkbox"/>	6020	
ION-NOSTAT LS Light-125	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6120	
ION-NOSTAT Plus	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6820	
DASTAT-D	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6220	
DASTAT-C	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6320	
DASTAT-V	<input type="checkbox"/> <input type="checkbox"/>	6420	
<b>Sizes</b>	<b>Circumference of the head</b>	<b>Sizes</b>	<b>Circumference of the head</b>
ES	up to approx. 55 cm	L	up to approx. 64 cm
S	up to approx. 58 cm	EL	from approx. 65 cm
M	up to approx. 61 cm		(Special sizes on request)
<input type="checkbox"/> white	<input type="checkbox"/> grey	<input type="checkbox"/> light blue	<input type="checkbox"/> light green <input type="checkbox"/> red
<input type="checkbox"/> light grey	<input type="checkbox"/> automotive grey	<input type="checkbox"/> dark blue	<input type="checkbox"/> olive green

The sizes listed here are based on practical experience and are not binding.  
In order to ensure correct fitting of sizes, we can provide samples.



## FACE MASKS

### Standard design:

- ▶ fastening on full cover hood with optional press buttons or Velcro inside/outside

### Special model with press gauze:

- ▶ fastening on full cover hood with optional push buttons or Velcro inside/outside

### Optional accessories:

- ▶ individual coding

### Further options on request.

Technical data are available in chapters 1.4/1.5 and fabric samples in chapter 1.5.



table of cleanroom classes  
see chapter 2.22

Fabric	Colours	Standard Art.-No.	Gauze Art.-No.
ION-NOSTAT VI.2-WA	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1040	1043
ION-NOSTAT I	<input type="checkbox"/> <input type="checkbox"/>	1140	1143
ION-NOSTAT VI.2	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1740	1743
ION-NOSTAT V	<input type="checkbox"/>	1840	1843
ION-NOSTAT BS	<input type="checkbox"/> <input type="checkbox"/>	6040	6043
ION-NOSTAT LS Light-125	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6140	6143
ION-NOSTAT Plus	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6840	6843
DASTAT-D	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6240	6243
DASTAT-C	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6340	6343
DASTAT-V	<input type="checkbox"/> <input type="checkbox"/>	6440	6443
Size: universal			
<input type="checkbox"/> white	<input type="checkbox"/> grey	<input type="checkbox"/> light blue	<input type="checkbox"/> light green <input type="checkbox"/> red
<input type="checkbox"/> light grey	<input type="checkbox"/> automotive grey	<input type="checkbox"/> dark blue	<input type="checkbox"/> olive green

## FULL COVER HOOD WITH EYE-SLIT

### Standard design:

- ▶ flat top
- ▶ adjustment by press buttons behind

### Optional accessories:

- ▶ high top for longer hair
- ▶ buckle or Velcro as adjustment at the back of the hood
- ▶ earmuffs with a choice of 2 alternative materials
- ▶ individual coding
- ▶ special fastening by ties to avoid displacing (under armpits)
- ▶ special construction for the use of glasses or goggles
- ▶ gauze strips in the mouth area

### Further options on request.

Technical data are available in chapters 1.4/1.5  
and fabric samples in chapter 1.5.



table of cleanroom classes  
see chapter 2.22

Fabric	Colours	Art.-No.	
ION-NOSTAT VI.2-WA	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1021	
ION-NOSTAT I	<input type="checkbox"/> <input type="checkbox"/>	1121	
ION-NOSTAT VI.2	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1721	
ION-NOSTAT V	<input type="checkbox"/>	1821	
ION-NOSTAT BS	<input type="checkbox"/> <input type="checkbox"/>	6021	
ION-NOSTAT LS Light-125	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6121	
ION-NOSTAT Plus	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6821	
DASTAT-D	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6221	
DASTAT-C	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6321	
DASTAT-V	<input type="checkbox"/> <input type="checkbox"/>	6421	
<b>Sizes</b>	<b>Circumference of the head</b>	<b>Sizes</b>	<b>Circumference of the head</b>
ES	up to approx. 55 cm	L	up to approx. 64 cm
S	up to approx. 58 cm	EL	from approx. 65 cm
M	up to approx. 61 cm		(Special sizes on request)
<input type="checkbox"/> white	<input type="checkbox"/> grey	<input type="checkbox"/> light blue	<input type="checkbox"/> light green <input type="checkbox"/> red
<input type="checkbox"/> light grey	<input type="checkbox"/> automotive grey	<input type="checkbox"/> dark blue	<input type="checkbox"/> olive green

The sizes listed here are based on practical experience and are not binding.  
In order to ensure correct fitting of sizes, we can provide samples.



## OPTIONS FOR FULL COVER HOODS

The following options show possibilities for individual customization of the hoods. We would be pleased to assist you to find the option which is most suitable for you.



High top for longer hair.



Earnets for more hearing comfort.



Fastening ribbon under the armpits, gives secure support without distraction.



Slit for glasses for eye protection. Simply more comfort.



Coding: Individual codes prevent mix up.



Press buttons, buckle or Velcro behind, allowing individual adjustment.



Mouth cover with press buttons or Velcro inside or outside. Quick and simple adjustment.

Press buttons on the outside (top picture) and inside (middle picture) Velcro on the outside (bottom picture)

## SIMPLE HOODS

### Beret hood

- ▶ elasticated
- ▶ adjustment by press buttons behind

### Forage cap

- ▶ adjustment by press buttons behind

### Peaked cap

- ▶ elastic

### Hood with snood

- ▶ adjustable at the neck by elastic or ribbon

Further options on request.

Technical data are available in chapters 1.4/1.5  
and fabric samples in chapter 1.5.



1 beret hood  
2 forage cap

3 peaked cap  
4 hood with snood with adjustment  
by elastic or ribbon

table of cleanroom classes  
see chapter 2.22

Fabric	Colours	Beret hood Art.-No.	Forage cap Art.-No.	Peaked cap Art.-No.	hood with snood	
					Elastic Art.-No.	Ribbon Art.-No.
ION-NOSTAT VI.2-WA	□ ■ ■ ■	1062	1065	1066	1063	1064
ION-NOSTAT I	□ ■	1162	1165	1166	1163	1164
ION-NOSTAT VI.2	□ ■ ■ ■ ■ ■	1762	1765	1766	1763	1764
ION-NOSTAT V	□	1862	1865	1866	1863	1864
ION-NOSTAT BS	□ ■	6062	6065	6066	6063	6064
ION-NOSTAT LS Light-125	□ ■ ■ ■ ■	6162	6165	6166	6163	6164
ION-NOSTAT Plus	□ ■ ■	6862	6865	6866	6863	6864
DASTAT-D	□ ■ ■	6262	6265	6266	6263	6264
DASTAT-C	□ ■ ■ ■	6362	6365	6366	6363	6364
DASTAT-V	□ ■	6462	6465	6466	6463	6464
Size: universal					<b>Circumference of the head</b> S up to approx. 56 cm M up to approx. 58 cm L up to approx. 60 cm EL up to approx. 63 cm  (Special sizes on request)	
□ white    ■ grey    ■ light blue    ■ light green    ■ red ■ light grey    ■ automotive grey    ■ dark blue    ■ olive green						



## OVERBOOTS

### Standard design:

- ▶ elastic on top
- ▶ adjustable by press button
- ▶ zipper in front
- ▶ snap lock over the instep, adjustable

### Soles:

- ▶ flexible, high synthetic sole
- ▶ firm, flat rubber sole, antistatic
- ▶ firm, high rubber sole, antistatic
- ▶ firm, grey rubber sole, antistatic

### Optional accessories:

- ▶ second snap lock at the front of the foot
- ▶ artificial leather reinforcements at the heel area and at the toe area of the sole (only for models with rubber sole)
- ▶ flexible synthetic sole, antistatic
- ▶ individual coding



1 high, flexible rubber sole  
2 firm, high rubber sole

3 high rubber sole with artificial leather reinforcements at heel and toe area  
4 firm, grey rubber sole

### Further options on request.

Technical data are available in chapters 1.4/1.5 and fabric samples in chapter 1.5.

table of cleanroom classes  
see chapter 2.22

Fabric	Colours	High synthetic sole Art.-No.	Flat rubber sole Art.-No.	High rubber sole Art.-No.	Grey rubber sole Art.-No.
ION-NOSTAT VI.2-WA	□ □ ■ ■	1053	1054	1056	1057
ION-NOSTAT I	□ □	1153	1154	1156	1157
ION-NOSTAT VI.2	□ □ ■ ■ ■ ■ ■	1753	1754	1756	1757
ION-NOSTAT V	□	1853	1854	1856	1857
ION-NOSTAT BS	□ ■	6053	6054	6056	6057
ION-NOSTAT LS Light-125	□ □ ■ ■ ■	6153	6154	6156	6157
ION-NOSTAT Plus	□ ■ ■	6853	6854	6856	6857
DASTAT-D	□ □ ■	6253	6254	6256	6257
DASTAT-C	□ □ ■ ■	6353	6354	6356	6357
DASTAT-V	□ □	6453	6454	6456	6457
<b>Sizes:</b>					
ES up to size 37	L up to size 43	EES, ES, S, M	S, M, L, EL	ES, S, S/M, M	ES, S, M, M/L
S up to size 39	EL from size 44	L, EL, EEL		M/L, L, EL	L, EL
M up to size 41		(special sizes on request)			
□ white	□ grey	□ light blue	■ light green	■ red	
□ light grey	■ automotive grey	■ dark blue	■ olive green		

## OVERSHOES

### Standard design:

- ▶ elastic on top
- ▶ adjustable by top press button

### Soles:

- ▶ flexible, flat synthetic sole
- ▶ flexible, high synthetic sole
- ▶ firm, flat rubber sole, antistatic, with snap lock over the instep

### Optional accessories:

- ▶ flexible synthetic sole, antistatic
- ▶ individual coding
- ▶ second snap lock at the front foot

### Further options on request.

Technical data are available in chapters 1.4/1.5  
and fabric samples in chapter 1.5.



1 overshoes with flat synthetic sole  
2 overshoes with high synthetic sole

Table of cleanroom classes  
see chapter 2.22

Fabric	Colours	Flat synthetic sole Art.-No.	High synthetic sole Art.-No.	Flat rubber sole Art.-No.
ION-NOSTAT VI.2-WA	□ □ ■ ■	1050	1051	1052
ION-NOSTAT I	□ □	1150	1151	1152
ION-NOSTAT VI.2	□ □ ■ ■ ■ ■	1750	1751	1752
ION-NOSTAT V	□	1850	1851	1852
ION-NOSTAT BS	□ ■	6050	6051	6052
ION-NOSTAT LS Light-125	□ □ ■ ■ ■	6150	6151	6152
ION-NOSTAT Plus	□ ■ ■	6850	6851	6852
DASTAT-D	□ □ ■	6250	6251	6252
DASTAT-C	□ □ ■ ■	6350	6351	6352
DASTAT-V	□ □	6450	6451	6452
<b>Sizes:</b>				
ES up to size 37	L up to size 43	EES, ES, S, M	EES, ES, S, M	S, M, L, EL
S up to size 39	EL from size 44	L, EL, EEL	L, EL, EEL	
M up to size 41		(special sizes on request)	(special sizes on request)	
□ white	■ grey	□ light blue	■ light green	■ red
■ light grey	■ automotive grey	■ dark blue	■ olive green	



## CLOG WITH TEXTILE GAITER

Especially for micro-biologically monitored areas, as it is washable and can be sterilised. Increases walking safety as the need for overboots is removed.

### Standard design:

- ▶ adjustable ribbon with press buttons at the top
- ▶ zipper connection between clog and textile gaiter
- ▶ thermoplastic version of the clogs, antistatic, washable and can be sterilised

### Optional accessories:

- ▶ individual coding
- ▶ adjustable ribbon with buckle at the top

### Further options on request.

**Note:** textile gaiters and TPE-clogs have to be ordered separately.

### TPE-Clog (Thermoplastic PE-clog)

- ▶ TPE-clog, exchangeable foot bed. Cleanable to 60 °C, clogs can be sterilised.

Article	Size	Art.-No.
TPE-Clog with zip	36-46	34300RV
<input type="checkbox"/> white <input checked="" type="checkbox"/> blue <input checked="" type="checkbox"/> green		

Technical data are available in chapters 1.4/1.5 and fabric samples in chapter 1.5.

### Textile gaiter for TPE-clog

Fabric	Colours	Art.-No.
ION-NOSTAT VI.2-WA	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	1059343
ION-NOSTAT I	<input type="checkbox"/> <input type="checkbox"/>	1159343
ION-NOSTAT VI.2	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	1759343
ION-NOSTAT V	<input type="checkbox"/>	1859343
ION-NOSTAT BS	<input type="checkbox"/> <input checked="" type="checkbox"/>	6059343
ION-NOSTAT LS Light-125	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	6159343
ION-NOSTAT Plus	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	6859343
DASTAT-D	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	6259343
DASTAT-C	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	6359343
DASTAT-V	<input type="checkbox"/> <input type="checkbox"/>	6459343
Sizes: 36 – 46		
<input type="checkbox"/> white <input type="checkbox"/> grey <input type="checkbox"/> light blue <input type="checkbox"/> light green <input checked="" type="checkbox"/> red <input type="checkbox"/> light grey <input type="checkbox"/> automotive grey <input checked="" type="checkbox"/> dark blue <input checked="" type="checkbox"/> olive green		



table of cleanroom classes  
see chapter 2.22



## SHOES WITH TEXTILE GAITER

A comfortable alternative for the user to the "classical" overboot is a combination of cleanroom suitable shoes and textile gaiters. Walking safety is increased and at the same time the thermal sensation is reduced. Almost all loafers and safety shoes in slipper form can be used for this kind of construction. Also it might be possible to use some mules.

### Standard design (gaiter):

- ▶ adjustable ribbon with press buttons at the top
- ▶ zipper connection between shoe and gaiter
- ▶ zipper in the front

### Optional accessories:

- ▶ individual coding
- ▶ adjustable ribbon with buckle at the top

Further options on request.

**Note:** textile gaiters and shoes have to be ordered separately.

Technical data are available in chapters 1.4/1.5 and fabric samples in chapter 1.5.



Fabric	Colours	Art.-No.
ION-NOSTAT VI.2-WA	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1059xxx
ION-NOSTAT I	<input type="checkbox"/> <input type="checkbox"/>	1159xxx
ION-NOSTAT VI.2	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1759xxx
ION-NOSTAT V	<input type="checkbox"/>	1859xxx
ION-NOSTAT BS	<input type="checkbox"/> <input type="checkbox"/>	6059xxx
ION-NOSTAT LS Light-125	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6159xxx
ION-NOSTAT Plus	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6859xxx
DASTAT-D	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6259xxx
DASTAT-C	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6359xxx
DASTAT-V	<input type="checkbox"/> <input type="checkbox"/>	6459xxx
Sizes: 36 – 48 (special sizes on request)		
<input type="checkbox"/> white <input type="checkbox"/> grey <input type="checkbox"/> light blue <input type="checkbox"/> light green <input type="checkbox"/> red <input type="checkbox"/> light grey <input type="checkbox"/> automotive grey <input type="checkbox"/> dark blue <input type="checkbox"/> olive green		

xxx = article number of the also ordered shoe

## TEXTILE OVERSOCK

### Another alternative to the overboot

Users who dislike overboots and also wan't use the model "shoe with textile gaiter" we are offering knee high "socks", which can be worn in cleanroom shoes.

#### Standard design:

- ▶ adjustable ribbon (with press buttons) at the top
- ▶ zipper in the front
- ▶ integrated elastic over instep

#### Optional accessories:

- ▶ knitted cuffs on top (at the same time zipper in front is dropped)
- ▶ individual coding

#### Further options on request.

Technical data are available in chapters 1.4/1.5  
and fabric samples in chapter 1.5.

table of cleanroom classes  
see chapter 2.22



Fabric	Colours	Art.-No.
ION-NOSTAT VI.2-WA	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1055
ION-NOSTAT I	<input type="checkbox"/> <input type="checkbox"/>	1155
ION-NOSTAT VI.2	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1755
ION-NOSTAT V	<input type="checkbox"/>	1855
ION-NOSTAT BS	<input type="checkbox"/> <input type="checkbox"/>	6055
ION-NOSTAT LS Light-125	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6155
ION-NOSTAT Plus	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6855
DASTAT-D	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6255
DASTAT-C	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6355
DASTAT-V	<input type="checkbox"/> <input type="checkbox"/>	6455
Sizes: S, M, L, E (special sizes on request)		
<input type="checkbox"/> white	<input type="checkbox"/> grey	<input type="checkbox"/> light blue
<input type="checkbox"/> light grey	<input type="checkbox"/> automotive grey	<input type="checkbox"/> dark blue
	<input type="checkbox"/> light green	<input type="checkbox"/> red
	<input type="checkbox"/> olive green	



## SLEEVES AND APRON

### Standard design sleeves:

- ▶ elastic top and bottom
- ▶ universal size (of 40 cm)

### Optional accessories:

- ▶ knitted cuffs at the bottom end
- ▶ individual coding
- ▶ special length

### Further options on request.

### Standard design apron:

- ▶ polyester ribbon fixed, top
- ▶ polyester ribbons for fastening at the back
- ▶ height x width = 80 x 70 cm
- ▶ universal size

### Further options on request.

Technical data are available in chapters 1.4/1.5  
and fabric samples in chapter 1.5.



Fabric	Colours	Arm sleeves Art.-No.	Apron Art.-No.
ION-NOSTAT VI.2-WA	□ □ ■ ■	1070	10751
ION-NOSTAT I	□ □	1170	11751
ION-NOSTAT VI.2	□ □ ■ ■ ■ ■ □	1770	17751
ION-NOSTAT V	□	1870	18751
ION-NOSTAT BS	□ ■	6070	60751
ION-NOSTAT LS Light-125	□ □ ■ ■ ■ □	6170	61751
ION-NOSTAT Plus	□ ■ ■ □	6870	68751
DASTAT-D	□ □ ■	6270	62751
DASTAT-C	□ □ ■ ■	6370	63751
DASTAT-V	□ □	6470	64751

Size: universal (special sizes on request)

□ white	■ grey	□ light blue	■ light green	■ red
□ light grey	■ automotive grey	■ dark blue	■ olive green	



## SPECIAL MODELS

### Individuality combined with useability

In practice it is often the case that certain details in the work-/production processes require special demands to the cleanroom garments, and hence of standard models are not suitable or need to be modified at least.

It is quite possible that other users have already had a similar "question" and we already have found a solution.

**dastex** provides you the opportunity to realize such individual solutions to meet your particular requirements.

The following described models are only a small extract of pre-existing concepts and may possibly help you in finding a solution for your special demands.

### Special model coverall

Realized for an international pharmaceutical company

**Application area:** class A/B

#### Features

- 1 in the front part a fire protection fabric is used.
- 2 the hood is connected with the coverall using a special zipper system, as contaminated air can only escape here with difficulty.
- 3 press buttons at special defined positions make the dressing procedure easier.



## Special model coverall

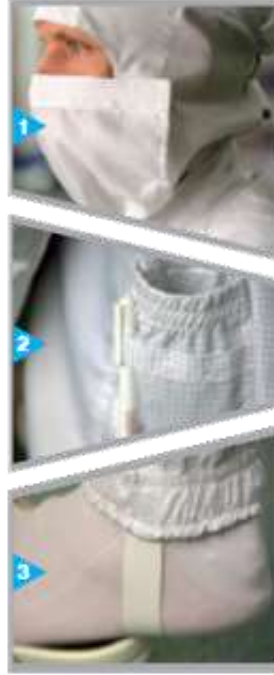
realized for an international active semiconductor company

**Application area: ISO-4 and 5**

### Features

- 1 way of wearing the textile mouth cover.
- 2 mobile phone pocket with pen loop.
- 3 tie bar rubber for simplified dressing of cleanroom boots.

In this project the main aim was to integrate needs and wishes from various production locations and departments into one common model.



## Special model belt sleeve gown

for a pharmaceutical company

**Application area: class C**

### Features

- 1 a belt sleeve gown, which is completely closed at the front, with overlapping in the back and simple ribbon fastening.



## Special model coverall

for a globally active automotive industry

**Application area: lacquer technology**

### Features

- 1 non apparent pockets with outside access.
- 2 ventilation under the armpits to improve wearing comfort.
- 3 ventilation at back to improve wearing comfort.



## Special apron

realized for a customer in the field of micro mechanic

**Application area: ISO-8**

### Features

- 1 a long apron with sleeves, which is completely closed in the front and easy tying in the back with a ribbon (backside open).





## Special model jacket and trouser

for an international active pharmaceutical company

**Application area:** class D/E  
(E according to own definition)

### Features

A combination of jacket and trouser, which enables an as high as possible wearing comfort. Also due to design and functionality it satisfies the demands of the particular department and it complies technically with the required limits.

- ▶ special pockets with bottom opening for better cleaning.



## Special model coat with exceptional sleeve ending

for an international active company  
in the field of electronic/automotive

**Application area:** ISO-7

### Features

- ▶ extraordinary sleeve ending in the form of an ESD-usable-knitted cuff with excess length. It prevents the user touching the product by accident.



## Special model hood

for an international active pharmaceutical company

**Application area: class A/B**

### Features

- 1 robust netting in the mouth-nose-area for improved wearing comfort (reduced breathing resistance). It is recommended to use a cleanroom compatible disposable mouth cover underneath (with appropriate filter capacity).
- 2 ribbons under the armpits to simplify the dressing procedure. Special fastening by ties to avoid displacing (under armpits).



## Special model coat

for an international active company  
in the field of electronic/automotive

**Application area: ISO-7 and 8**

### Features

- 1 particular ESD-usable sleeve ending, which fits relatively tightly without constriction.
- 2 a special design has been developed to comply to the very high ESD demand. In order to meet this requirements special conductive seams have been developed.



## Special model jacket and trouser

for an international active company  
in the field of medical technology

**Application area: ISO-6 and 7**

### Features

- 1 a two part combination with high ESD-characteristics, consisting of a short coat and trouser. Design, seams and optional extras are based on the user's requirements.



## Special model coverall

for an international active semiconductor company

**Application area: ISO-4 and 5**

### Features

- 1 a coverall with special insert in the stomach area for protection against light chemicals.







## TECHNICAL DATA I: TESTED DASTEX FABRICS



### ION-NOSTAT VI.2

Criterion	ION-NOSTAT VI.2	
<b>Fabric</b>	HA	98 % Polyester + 2 % Carbon
<b>Dispersion of the conductive fibre</b>	HA	warp & weft by intervals of 5 mm
<b>Conductive material /yarn</b>	HA	Carbon-Fibre in "Sandwich-Construction" Carbon interim  Polyester fibre
<b>Weave</b>	HA	Twill 3/2 (Scale of 2:1) 
<b>Weight</b>	ITV	approx. 113 g/m <sup>2</sup>
<b>Air permeability (DIN 53887) at 200 Pa (l/min x dm<sup>2</sup>)</b>	ITV	29.2
<b>Water vapour diffusion resistance</b> 35 °C 40 % r.F. 10 <sup>-3</sup> m <sup>2</sup> mbar/V	FIH	28.3
As a result the <b>wearing comfort</b> is		very good
<b>Particle retention capacity for airborne particles</b> Duration: 60 min Crude gas concentration: 25 mg/m <sup>3</sup>	ITV	0.5 µm, approx. 97 % 5.0 µm, approx. 98 %
<b>Electrostatic behaviour</b> a) Charge tendency (valuation) b) Discharge velocity (valuation)	ITV	in warp & weft direction: low in warp & weft direction: very high
<b>Surface resistance (DIN 54345)</b>	HA	10 <sup>7</sup> – 10 <sup>9</sup> Ohms
<b>Abrasion tendency</b> Test method Martindale (valuation)	ITV	good to very good



**ITV** = the data derives from the **Institute for textile technology, Denkendorf** (compare chapter 1.2) after 50 decontaminations

**FIH** = the data derives from **Hohenstein Institute** (compare chapter 1.2) after 50 decontaminations

**HA** = the data derives from the manufacturer



The above data is the result of the **tests made by independent textile research institutes** (see also chapter 1.2) and by our textile manufacturers. The results are accurate to the best of our knowledge, however we cannot give a guarantee for the correctness of the results.



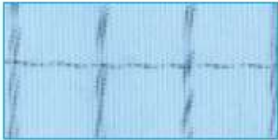
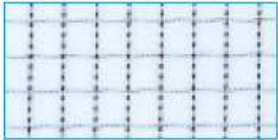
The fabric ION-NOSTAT VI.2 was additionally tested and certified by the Hohenstein Institute for breathability. Certification number 06.4.5535.

**dastex**

## TECHNICAL DATA II: TESTED DASTEX FABRICS



### ION-NOSTAT V and ION-NOSTAT Plus

Criterion		ION-NOSTAT V	ION-NOSTAT Plus
<b>Fabric</b>	HA	98 % Polyester + 2 % Carbon	96 % Polyester + 4 % Carbon
<b>Dispersion of the conductive fibre</b>	HA	warp & weft by intervals of 5mm	warp & weft by intervals of 3mm
<b>Conductive material / yarn</b>	HA	Carbon-Fibre in "Sandwich-Construction" Carbon interim  Polyester fibre	Carbon-Fibre as Coated Construction Polyester nucleus  Carbon coated
<b>Weave</b>	HA	Taffeta 1/1 (Scale of 2:1) 	Twill 2/1 (Scale of 2:1) 
<b>Weight</b>	ITV	approx. 105 g/m <sup>2</sup>	approx. 100 g/m <sup>2</sup>
<b>Air permeability</b> (DIN 53887) at 200 Pa (l/min x dm <sup>2</sup> )	ITV	20	23
<b>Water vapour diffusion resistance</b> 35 °C 40 % r.F. 10 <sup>-3</sup> m <sup>2</sup> mbar/V	FIH	32	22.5
As a result the <b>wearing comfort</b> is		good	very good
<b>Particle retention capacity for airborne particles</b> Duration: 60 min Crude gas concentration: 25 mg/m <sup>3</sup> For ION-NOSTAT V the crude gas concentration was 10mg/m <sup>3</sup>	ITV	0.5 µm, approx. 75 % 5.0 µm, approx. 95 %	0.5 µm, approx. 83 % 5.0 µm, approx. 84 %
<b>Electrostatic behaviour</b> a) Charge tendency (valuation) b) Discharge velocity (valuation)	ITV	in warp and weft direction, low in warp and weft direction, very high	in warp & weft direction: very low in warp & weft direction: very high
<b>Surface resistance</b> (DIN 54345)	HA	10 <sup>7</sup> – 10 <sup>9</sup> Ohms	10 <sup>6</sup> – 10 <sup>9</sup> Ohms
<b>Abrasion tendency</b> Test method Martindale (valuation)	ITV	satisfactory	good to very good

ITV = the data derives from the **Institute for textile technology, Denkendorf** (compare chapter 1.2) after 50 decontaminations

FIH = the data derives from **Hohenstein Institute** (compare chapter 1.2) after 50 decontaminations

HA = the data derives from the manufacturer



The above data is the result of the **tests made by independent textile research institutes** (see also chapter 1.2) and by our textile manufacturers. The results are accurate to the best of our knowledge, however we cannot give a guarantee for the correctness of the results.

The fabric ION-NOSTAT Plus was additionally tested and certified by the Hohenstein Institute for breathability. Certification number 06.4.5535.



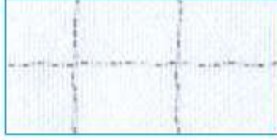

**dastex**



## TECHNICAL DATA III: TESTED DASTEX FABRICS



### ION-NOSTAT LS Light-125 and DASTAT-V

Criterion		ION-NOSTAT LS Light-125	DASTAT-V
<b>Fabric</b>	HA	98 % Polyester + 2% Negastat®	98 % Polyester + 2 % Carbon
<b>Dispersion of the conductive fibre</b>	HA	warp & weft by intervals of 8 mm	warp & weft by intervals of 5 mm
<b>Conductive material / yarn</b>	HA	Negastat® fibre Carbon nucleus  Polyester fibre	Carbon-Fibre in "Sandwich-Construction" Carbon interim  Polyester fibre
<b>Weave</b>	HA	Twill (body) 2/1 (Scale 2:1) 	Taffeta (Canvas) 1/1 (Scale of 2:1) 
<b>Weight</b>	ITV	approx. 125 g/m <sup>2</sup>	approx. 100 g/m <sup>2</sup>
<b>Air permeability</b> (DIN 53887) at 200 Pa (l/min x dm <sup>2</sup> )	ITV	352	7.9
<b>Water vapour diffusion resistance</b> 35 °C 40 % r.F. 10 <sup>-3</sup> m <sup>2</sup> mbar/V	FIH	18.2	31.5
As a result the <b>wearing comfort</b> is		very good	good
<b>Particle retention capacity for airborne particles</b> Duration: 60 min Crude gas concentration: 25 mg/m <sup>3</sup>	ITV	0.5 µm, approx. 15 % 5.0 µm, approx. 74 %	0.5 µm, approx. 93 % 5.0 µm, approx. 96 %
<b>Electrostatic behaviour</b> a) Charge tendency (valuation) b) Discharge velocity (valuation)	ITV	in warp & weft direction, low to medium in warp & weft direction, medium	in warp & weft direction, low in warp & weft direction, very high
<b>Surface resistance</b> (DIN 54345)	HA	– not tested – (not possible when using Negastat®)	10 <sup>7</sup> – 10 <sup>9</sup> Ohms
<b>Abrasion tendency</b> Test method Martindale (valuation)	ITV	satisfactory	satisfactory to good

ITV = the data derives from the **Institute for textile technology, Denkendorf** (compare chapter 1.2) after 50 decontaminations

FIH = the data derives from **Hohenstein Institute** (compare chapter 1.2) after 50 decontaminations

HA = the data derives from the manufacturer

The above data is the result of the **tests made by independent textile research institutes** (see also chapter 1.2) and by our textile manufacturers. The results are accurate to the best of our knowledge however we cannot give a guarantee for the correctness of the results.



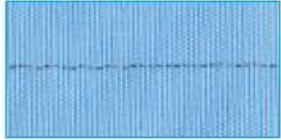

**dastex**



## TECHNICAL DATA IV: TESTED DASTEX FABRICS



### DASTAT-C and DASTAT-D

Criterion		DASTAT-C	DASTAT-D
<b>Fabric</b>	HA	99 % Polyester + 1 % Carbon	99 % Polyester + 1 %
<b>Dispersion of the conductive fibre</b>	HA	warp by intervals of 8 mm	warp by intervals of 5 mm
<b>Conductive material / yarn</b>	HA	Carbon-Fibre in "Sandwich-Construction" Carbon interim  Polyester fibre	Carbon-Fibre as Coated Construction Polyester nucleus  Carbon coated
<b>Weave</b>	HA	Taffeta (Canvas) 1/1 (Scale of 2:1) 	Twill (body) 2/1 (Scale 2:1) 
<b>Weight</b>	ITV	approx. 121 g/m <sup>2</sup>	approx. 95 g/m <sup>2</sup>
<b>Air permeability</b> (DIN 53887) at 200 Pa (l/min x dm <sup>2</sup> )	ITV	36.5	41.9
<b>Water vapour diffusion resistance</b> 35 °C 40 % r.F. 10 <sup>-3</sup> m <sup>2</sup> mbar/V	FIH	25.7	24.2
As a result the <b>wearing comfort</b> is		very good	very good
<b>Particle retention capacity for airborne particles</b> Duration: 60 min Crude gas concentration: 25 mg/m <sup>3</sup>	ITV	0.5 µm, approx. 68 % 5.0 µm, approx. 80 %	0.5 µm, approx. 50 % 5.0 µm, approx. 70 %
<b>Electrostatic behaviour</b> a) Charge tendency (valuation) b) Discharge velocity (valuation)	ITV	in warp direction, low in weft direction, medium in warp direction, medium in weft direction, medium to low	in warp direction, low in weft direction, medium to high in warp direction, medium in weft direction, low
<b>Surface resistance</b> (DIN 54345)	HA	10 <sup>7</sup> – 10 <sup>8</sup> Ohms	10 <sup>5</sup> – 10 <sup>6</sup> Ohms
<b>Abrasion tendency</b> Test method Martindale (valuation)	ITV	satisfactory	good

ITV = the data derives from the **Institute for textile technology, Denkendorf** (compare chapter 1.2) after 50 decontaminations

FIH = the data derives from **Hohenstein Institute** (compare chapter 1.2) after 50 decontaminations

HA = the data derives from the manufacturer

The above data is the result of the **tests made by independent textile research institutes** (see also chapter 1.2) and by our textile manufacturers. The results are accurate to the best of our knowledge however we cannot give a guarantee for the correctness of the results.

**dastex**

## IMPORTANT INFORMATION ABOUT UNDERGARMENTS

### General Information

Cleanroom undergarments should be manufactured – in comparison to everyday clothing (jeans, T-shirt etc.) – from materials that are abrasion resistant. This prevents large numbers of particles shedding from the garments and then entering the room by diffusion or migration or due to the pump effect (overpressure). The efficiency of cleanroom undergarments has been proved with various tests, among other in the textile research institute ITV-Denkendorf. In addition, the high wearing comfort of the complete cleanroom garment system is much improved and along with it the willingness of cleanroom workers to wear it.

We offer different textile types of cleanroom undergarments:  
(for samples see chapter 3.2)

#### **dastex High-Tech®**

- ▶ knitted, very elastic and abrasion resistant product made of synthetic fabric
- ▶ active humidity exchange with the outside of the textile provides increased climate control
- ▶ high air permeability
- ▶ very low particle generation in comparison with pure cotton
- ▶ high wearing comfort
- ▶ available in several colours

#### **dastex Comfort**

- ▶ double-layer, elastic knitted fabric
- ▶ cotton inner (52 %), polyester outer (48 %)
- ▶ low particle generation due to the abrasion resistant polyester outer
- ▶ high wearing comfort, feels like cotton
- ▶ available in several colours

#### **dastex Comfort II**

- ▶ double-layer, elastic knitted fabric
- ▶ polyester inner, polyester-cotton-mix outer
- ▶ total of 78 % Polyester and 22 % cotton
- ▶ high wearing comfort due to cotton part on the outside, which acts similar to a sponge by sucking moisture through the polyester layer and stores it
- ▶ currently only available in white (other colours on request)

#### **dastex Light-Tech II**

- ▶ abrasion resistant, very light synthetic fabric (microfibre)
- ▶ smooth, textile surface with a "silky" feel
- ▶ very low particle generation in comparison with cotton
- ▶ high wearing comfort
- ▶ available in several colours
- ▶ antimicrobial equipment

#### **dastex Light-Tech AS**

- ▶ abrasion resistant, very light synthetic fabric (microfibre) with conducting fibre for antistatic demands
- ▶ smooth, textile surface with a "silky" feel
- ▶ very low particle generation in comparison with cotton
- ▶ high wearing comfort
- ▶ currently only available in blue (other colours on request)





## IMPORTANT INFORMATION ABOUT UNDERGARMENTS

### General Information

#### **dastex Comfordal I**

- ▶ double-layer, elastic knitted fabric
- ▶ polyester inner, cotton-polyester-modal-mix outer
- ▶ total of 52 % polyester and 48 % cotton-modal-mix
- ▶ high wearing comfort due to cotton-modal-part
- ▶ due to its area weight (approx. 215 g/m<sup>2</sup>) mainly used for jackets and trousers
- ▶ currently only available in blue (other colours on request)

#### **dastex Comfordal II**

- ▶ double-layer, elastic knitted fabric
- ▶ polyester inner, cotton-polyester-modal-mix outer
- ▶ total of 40 % polyester and 60 % cotton-modal-mix
- ▶ high wearing comfort due to cotton-modal-part
- ▶ due to its area weight (approx. 160 g/m<sup>2</sup>) mainly used for T-shirts
- ▶ currently only available in white (other colours on request)

#### **dastex Stretch-Tech AS**

- ▶ highly elastic knitted fabric
- ▶ the grip of the applied synthetical fibres (polyester) is almost equal to cotton. This will result in higher wearing comfort.
- ▶ conductive fibres guarantee antistatic behaviour
- ▶ very low particle generation due to higher abrasion resistance in comparison to cotton
- ▶ high air permeability
- ▶ mainly used for production of T-shirts
- ▶ currently only available in white (other colours on request)





## T-SHIRTS WITH LONG AND SHORT SLEEVES

### T-shirts 1/2-arm from elastic material

- ▶ light stand-up collar, round neckline
- ▶ simple hem at arms and hip

### T-shirts 1/1-arm from elastic material

- ▶ light stand-up collar, round neckline
- ▶ cuff at arms
- ▶ simple hem at hip

Further options on request.



T-shirt 1/1-arm made from **dastex Comfort** in burgundy red

Material	Sizes	Colours	1/2-arm Art.-No.	1/1-arm Art.-No.
High-Tech® *1	6-15	■ ■ ■ ■ ■ ■	0180E	0181E
Comfort *2	5-14	■ ■ ■ ■ ■ ■	0280N	0281N
Comfort II *2	5-14	□	0980N	0981N
Comfordal II *2	5-14	□	0880N	0881N
Stretch-Tech-AS *2	5-14	□	7680N	7681N

□ white   ■ navy blue   ■ ruby red   ■ burgundy red  
 ■ grey   ■ navy blue/grey   ■ ruby red/grey   ■ burgundy red/grey

	Sizes									
Material*1	6	7	8	9	10	11	12	13	14	15
Material*2	5	6	7	8	9	10	11	12	13	14
Ladies	36	38	40	42	44	46	48	50	52	54
Men	42	44	46	48	50	52	54/56	58	60	62/64

The sizes listed here are based on practical experience. In order to ensure correct fitting of the sizes, we would suggest supplying samples.

table of cleanroom classes  
see chapter 3.8

## TOPS WITH LONG AND SHORT SLEEVES

### Tops 1/2-arm from elastic material

- ▶ light stand-up collars, round neckline
- ▶ simple hem at arms
- ▶ cuffs at hip

### Tops 1/2-arm from Light-Tech II and Light-Tech AS

- ▶ light stand-up collar, round neckline
- ▶ press button tape (synthetic material) at the throat
- ▶ simple hems at arms and hip

### Tops 1/4-arm from elastic material

- ▶ light stand-up collar, round neckline
- ▶ cuffs at arms and hip

### Tops 1/4-arm from Light-Tech II and Light-Tech AS

- ▶ light stand-up collars, round neckline
- ▶ press button tape (synthetic material) at the throat
- ▶ elastic at the arms
- ▶ simple hem at hip

Further options are available on request.



Material	Sizes	Colours	1/2-arm Art.-No.	1/1-arm Art.-No.
High-Tech®	ES-EEEL	■ ■ ■ ■ ■	0185	0186
Comfort	ES-EEEL	■ ■ ■ ■ ■	0285	0286
Light-Tech II	ES-EEEL	■ ■ ■ ■ ■ ■ ■	0585	0586
Light-Tech AS	ES-EEEL	■	7585	7586
Comfordal II	ES-EEEL	□	0885	0886
Comfort II	ES-EEEL	□	0985	0986
□ white ■ navy blue ■ ruby red ■ burgundy red ■ green ■ grey ■ navy blue/grey ■ ruby red/grey ■ burgundy red/grey ■ green/grey				

Further designs, colour combinations as well as changes to the standard design and additional options are available on request.

Sizes	ES	S	M	L	EL	EEL	EEEL
Ladies	36	38	40/42	44/46	48	50	52/54
Men	42	44	46/48	50/52	54	56/58	60/62

The sizes listed here are based on practical experience. In order to ensure correct fitting of the sizes, we would suggest supplying samples.

table of cleanroom classes  
see chapter 3.8

- 1 top with 1/2-arm made from **dastex Light-Tech II** in red/grey
- 2 top with 1/4-arm made from **dastex High-Tech®** in navy blue/grey
- 3 top with 1/4-arm made from **dastex Light-Tech II** in blue/grey



## JACKETS, TROUSERS AND SHORTS

### Standard design jacket

- ▶ light stand-up collar
- ▶ zipper in front
- ▶ elastic at arms and hip

### Standard design trouser

- ▶ elastic waistband with drawstring
- ▶ two pockets at the side
- ▶ fabric cuffs at legs with **High-Tech®**, **Comfort**, and **Comfordal I**
- ▶ elastic band at legs with **Light-Tech II** and **Light-Tech AS**

### Standard design short

- ▶ elastic waistband with drawstring
- ▶ simple hem at legs

Further options are available on request.



Material	Sizes	Colours	Jacket Art.-No.	Trouser Art.-No.	Shorts Art.-No.
High-Tech®	ES-EEEL	■ ■ ■	0133	0190	0191
Comfort	ES-EEEL	■ ■ ■	0233	0290	0291
Light-Tech II	ES-EEEL	■ ■ ■ ■	0533	0590	0591
Light-Tech AS	ES-EEEL	■	7533	7590	7591
Comfordal I	ES-EEEL	■	0733	0790	0791
■ navy blue   ■ blue   ■ grey   ■ ruby red   ■ burgundy red   ■ green					

Further designs, colour combinations as well as changes to the standard design and additional options are available on request.

Sizes	ES	S	M	L	EL	EEL	EEEL
Ladies	36	38	40/42	44/46	48	50	52/54
Men	42	44	46/48	50/52	54	56/58	60/62

The sizes listed here are based on practical experience. In order to ensure correct fitting of the sizes, we would suggest supplying samples.

- 1 jacket made from **dastex Light-Tech II** in green/grey  
 2 combination with jacket and trouser made from **dastex Comfordal I** in navy blue/grey



## IMPORTANT INFORMATION ABOUT SHOES



### General Information

We are able to supply cleanroom shoes from the leading manufacturers **ABEBA** and **Schürr** along with some additional products from specialist manufacturers.

Our range can be summarised as follows:

#### Slippers

- ▶ top made of perforated or smooth leather
- ▶ with/without an adjustable heel strap
- ▶ non-conductive, antistatic or suitable for ESD

#### Loafers

- ▶ as slippers
- ▶ for tying or with Velcro fastening
- ▶ with/without an exchangeable insole
- ▶ to some extent with special damping for higher wearing comfort
- ▶ non-conductive, antistatic or suitable for ESD
- ▶ to some extent washable

#### Boots

- ▶ antistatic, with an exchangeable insole, pen loops

#### Safety shoes

- ▶ as slippers
- ▶ with protective caps made of steel or light composite
- ▶ as mules or loafers
- ▶ with ties or Velcro fastening
- ▶ antistatic or suitable for ESD

#### PU-clogs and thermoplastic PE-clogs

- ▶ with/without adjustable heel strap
- ▶ antistatic
- ▶ with an exchangeable insoles
- ▶ washable to 60° C
- ▶ can to some extent be sterilised (autoclavable or by gamma irradiation)

#### Would you like additional models?

We would be pleased to check which of the manufacturers could cater for your individual requirements. Also we can deliver shoes in over-sizes. Please contact us for more details.



- 1 slipper
- 2 loafer
- 3 boot
- 4 safety shoe
- 5 clog

## SLIPPERS WITH ESD SOLE

Abeba-No.	Colours	Art.-No.
5300	<input type="checkbox"/> white	32100
5310	<input checked="" type="checkbox"/> black	32100

Sizes: 36-47

- ▶ leather upper
- ▶ adjustable and movable heel straps
- ▶ smooth leather, perforated
- ▶ slip resistant: DIN 4843 part 100
- ▶ CE, DIN EN 347-1



Abeba-No.	Colours	Art.-No.
5200	<input type="checkbox"/> white	32110
5250	<input checked="" type="checkbox"/> navy	32110

Sizes: 36-47

- ▶ leather upper
- ▶ adjustable and movable heel straps
- ▶ smooth leather
- ▶ slip resistant: DIN 4843 part 100
- ▶ CE, DIN EN 347-1

Abeba-No.	Colours	Art.-No.
5100	<input type="checkbox"/> white	32210
5150	<input checked="" type="checkbox"/> navy	32210

Sizes: 36-47

- ▶ leather upper & insole
- ▶ adjustable fixed heel strap
- ▶ smooth leather
- ▶ adjustable instep straps
- ▶ slip resistant: DIN 4843 part 100
- ▶ CE, DIN EN 347-1

Abeba-No.	Sizes	Art.-No.
38600	35-47	32230
38602	48-51	32230

Colour:  white

- ▶ leather upper & lining
- ▶ fixed heel strap with synthetic fastening
- ▶ elasticated on instep
- ▶ smooth leather, perforated
- ▶ slip resistant: DIN 4843 part 100
- ▶ CE, DIN EN 347-1

## SLIPPERS WITH ANTISTATIC SOLE

Abeba-No.	Colour	Art.-No.
5007	<input type="checkbox"/> white	32040
Sizes: 36-47		

- ▶ leather upper & insole
- ▶ adjustable and snap fastening heel straps
- ▶ smooth leather, perforated
- ▶ slip resistant: DIN 4843 part 100
- ▶ CE, DIN EN 347-1

Abeba-No.	Colour	Art.-No.
5013	<input type="checkbox"/> white	32010
Sizes: 36-47		

- ▶ leather upper & insole
- ▶ adjustable and snap fastening heel straps
- ▶ smooth leather
- ▶ slip resistant: DIN 4843 part 100
- ▶ CE, DIN EN 347-1

Abeba-No.	Colour	Art.-No.
8700	<input type="checkbox"/> white	32350
Sizes: 36-47		

- ▶ Lorica upper, breathable
- ▶ with Velcro adjustable instep & heel strap
- ▶ washable/decontaminatable
- ▶ slip resistant: DIN 4843 part 100
- ▶ hypo-allergenic

Abeba-No.	Sizes	Art.-No.
8600	35-47	32233
8602	48-51	32233
Colour: <input type="checkbox"/> white		

- ▶ leather upper & lining
- ▶ fixed heel strap with synthetic fastening
- ▶ elasticated on instep
- ▶ perforated
- ▶ slip resistant: DIN 4843 part 100
- ▶ CE, DIN EN 347-1

Table of cleanroom clothes  
see chapter 5.9

5007



5013



8700



8600





## LOAFERS WITH ESD SOLE

Abeba-No.	Colours	Art.-No.
31132	<input type="checkbox"/> white	32470
31137	<input checked="" type="checkbox"/> black	32470
Sizes: 35-48		

- ▶ special lining, sweat and moisture absorbent
- ▶ elasticated on instep
- ▶ exchangeable acc-insoles
- ▶ smooth leather
- ▶ slip resistant: DIN 4843 part 100
- ▶ CE, DIN EN 347-1

Abeba-No.	Colour	Art.-No.
31143	<input type="checkbox"/> white	32472
Sizes: 35-48		

- ▶ special lining, sweat and moisture absorbent
- ▶ elasticated on instep
- ▶ exchangeable acc-insole
- ▶ perforated
- ▶ slip resistant: DIN 4843 part 100
- ▶ CE, DIN EN 347-1



## LOAFERS WITH ANTISTATIC SOLE

Abeba-No.	Colours	Art.-No.
1132	<input type="checkbox"/> white	32473
1137	<input checked="" type="checkbox"/> black	32473
Sizes: 35-48		

- ▶ special lining, sweat and moisture absorbent
- ▶ elasticated on instep
- ▶ exchangeable acc-insoles
- ▶ smooth leather
- ▶ slip resistant: DIN 4843 part 100
- ▶ CE, DIN EN 347-1

Abeba-No.	Colours	Art.-No.
2300	<input type="checkbox"/> white	32955
2310	<input checked="" type="checkbox"/> black	32955
Sizes: 35-47		
Sizes: 39-47		

- ▶ leather upper and special lining
- ▶ elasticated on instep
- ▶ exchangeable foot bed
- ▶ perforated
- ▶ slip resistant: DIN 4843 part 100
- ▶ CE, DIN EN 347-1

Orthopaedic insoles are also available on request.

## SAFETY SHOES WITH ESD SOLE AND STEEL TOE CAP

Abeba-No.	Colours	Art.-No.
31030	☐ white	32515
31035	■ black	32515
Sizes: 35-48		

- ▶ special lining, sweat and moisture absorbent
- ▶ with Velcro adjustable heel strap
- ▶ exchangeable gel insoles
- ▶ smooth leather
- ▶ slip resistant: DIN 4843 part 100
- ▶ CE, DIN EN 347-1

table of cleanroom classes  
see chapter 5.9

31030



31035



## SAFETY SHOES WITH ESD SOLE AND PLASTIC TOE CAP

Abeba-No.	Colour	Art.-No.
1275	■ black	32570
Sizes: 36-47		

- ▶ two exchangeable insoles
- ▶ leather/carbon-optic upper
- ▶ air-mesh textile inserts, breathable
- ▶ individually adjustable Velcro
- ▶ reflector strips
- ▶ CE, EN ISO 20347:2004

1275



Abeba-No.	Colour	Art.-No.
31392	☐ white	32564
Sizes: 36-47		

- ▶ Lorica upper, breathable
- ▶ two exchangeable insoles
- ▶ elasticated on instep
- ▶ washable
- ▶ slip resistant: DIN 4843 part 100
- ▶ CE, DIN EN 347-1

31392



## PU-CLOG

- ▶ PU-clog, antistatic, with or without adjustable heel strap, exchangeable insoles
- ▶ washable to 60° C

	Sizes	Colours	Art.-No.
With straps	36-46 + 47/48	<input type="checkbox"/> white <input type="checkbox"/> blue <input type="checkbox"/> green <input type="checkbox"/> yellow <input type="checkbox"/> red	31160
Without straps	36-46 + 47/48	<input type="checkbox"/> white <input type="checkbox"/> blue <input type="checkbox"/> green <input type="checkbox"/> yellow <input type="checkbox"/> red	31180
<input type="checkbox"/> white <input type="checkbox"/> blue <input type="checkbox"/> green <input type="checkbox"/> yellow <input type="checkbox"/> red			

- ▶ exchangeable insoles for PU-clog (Art.-No. 31160 and 31180)
- ▶ washable to 60° C

	Sizes	Colours	Art.-No.
Insoles	36-46 + 47/48	<input type="checkbox"/> white	31340

- ▶ further PU-clogs, for example with steel toe caps on request

## TPE-CLOG (THERMOPLASTIC PE-CLOG)

- ▶ TPE-clog, with or without movable heel strap
- ▶ washable to 60° C, clog can be sterilised

	Sizes	Colours	Art.-No.
With straps	36-46	<input type="checkbox"/> white <input type="checkbox"/> blue <input type="checkbox"/> green	34300
Without straps	36-46	<input type="checkbox"/> white <input type="checkbox"/> blue <input type="checkbox"/> green	34400
<input type="checkbox"/> white <input type="checkbox"/> blue <input type="checkbox"/> green			

- ▶ textile gaiter for TPE-clog-see also chapter 2.15



TPE with textile gaiter see chapter 2.15



## SCHUERR-SHOES

Schuerr-No.	Sizes	Art.-No.
5.1000.01.51	36-40	31410
5.1100.01.51	41-47	31410

Colour:  white

- ▶ sandals white, with shaft padding
- ▶ adjustable and hinged heel straps
- ▶ exchangeable/washable insoles
- ▶ slip resistant PU sole, DIN 4843 part 100
- ▶ leather upper
- ▶ ESD approved to DIN EN 61340



Schuerr-No.	Sizes	Art.-No.
5.1004.01.51	36-40	31320
5.1104.01.51	41-47	31320

Colour:  white

- ▶ slipper white, perforated
- ▶ exchangeable/washable insoles
- ▶ slip resistant PU sole, DIN 4843 part 100
- ▶ leather upper
- ▶ ESD approved to DIN EN 61340



Schuerr-No.	Sizes	Art.-No.
5.1002.01.51	36-40	31325
5.1102.01.51	41-47	31325

Colour:  white

- ▶ slipper white, non-perforated
- ▶ exchangeable/washable insoles
- ▶ slip resistant PU sole, DIN 4843 part 100
- ▶ leather upper
- ▶ ESD approved to DIN EN 61340



Schuerr-No.	Sizes	Art.-No.
5.1008.01.51	36-40	31253
5.1108.01.51	41-47	31253

Colour:  white

- ▶ sandal white, with adjustable instep and heel straps
- ▶ exchangeable/washable insoles
- ▶ slip resistant PU sole, DIN 4843 part 100
- ▶ leather upper
- ▶ ESD approved to DIN EN 61340



## BOOTS

Schuerr-No.	Sizes	Art.-No.
4.1280.01.30	35-38	31850
4.1180.01.41	39-52	31860
Colour: <input type="checkbox"/> white		

- ▶ upper micro fibre, breathable
- ▶ exchangeable/washable insoles
- ▶ triple cushion on heel area



## SHOE WITH TEXTILE GAITER

A comfortable alternative for the wearer to the "classical" overboot is a combination of cleanroom suitable shoes and textile gaiters. Walking safety is increased and at the same time the thermal sensation is reduced. Almost all loafers and safety shoes in slipper form can be used for this kind of construction.

For details please see chapter 2.16.

**Note:** textile gaiter and shoes have to be ordered separately.



## IMPORTANT INFORMATION ABOUT DISPOSABLE & PROTECTIVE CLOTHING

### General Information

Disposable clothing (coverall, apron, trousers, ...) are often a necessary addition to textile cleanroom garments.

Depending on the application, a variety of designs and quality have to be considered (e.g. antistatic). When using toxic or other dangerous materials disposable coveralls with seals are often required.

The following **disposable products** are completing the garment range:

- ▶ fleece caps and full cover hoods
- ▶ overshoes and boots
- ▶ face masks, beard protection, glasses and visors
- ▶ sleeve protectors
- ▶ aprons

**You will find disposable gloves and finger cots in chapter 7.**

The practical usage of different components, possibly also with standard cleanroom garments can achieve contamination reduction.

**Disposable clothing can also be delivered sterile – singly or packaged as a set – on request.**

**We would be pleased to help with any questions you might have regarding disposable clothing.**



- 1 coverall with integrated hood
- 2 face mask with visor
- 3 overshoes with reinforced sole





## DISPOSABLE CAPS

### Standard design:

- ▶ made of a high quality, long fibred, "non-woven" fleece material
- ▶ stacked flat to prevent an early fibre break
- ▶ packing unit is 1000 pieces, packed into cleanroom appropriate double plastic bags of 100 pieces each
- ▶ latex free

We recommend the acrylic dispenser box in chapter 15.2.

Sizes	Colours	PU	Art.-No.
S (ca. 46 cm / 18")	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1000 pieces (10 PE bags of 100 pieces each)	4050
M (ca. 54 cm / 21")	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
L (ca. 60 cm / 24")	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> white <input type="checkbox"/> blue <input type="checkbox"/> green (Further colours on request)			



## BEARD PROTECTION

### Standard design:

- ▶ made of a high quality, long fibred, "non-woven" fleece material
- ▶ an extra large version, unstretched approx. 170 x 140 mm
- ▶ packing unit is 1000 pieces packed into cleanroom appropriate double plastic bags of 100 pieces each
- ▶ latex free

We recommend the acrylic dispenser box in chapter 15.2.

Size	Colour	PU	Art.-No.
universal	<input type="checkbox"/> white	1000 pieces (10 PE bags of 100 pieces)	4045



## DISPOSABLE FACE MASKS

### Standard version

Wearing comfort, filter performance and processing quality are the most important criteria for the evaluation of disposable face masks.

Taking into account the packaging requirements for a cleanroom, we are able to offer our range of disposable face masks, also in individual packaging.

Standard width: approx. 18 cm

### Extra broad version:

A special protection for skin particles and beard hairs in the cheek area is offered with the extra broad face mask, which covers these critical areas substantially better. The extra broad face mask is also individually packed available.

Extra broad version: approx. 21cm

We recommend the acrylic dispenser box in chapter 15.2.

Disposable face masks	PU	Art.-No.
standard (to tie)		4160
standard (with elastic loops)	1000 pieces, (20 PE bags of 50 pieces) individually packed	4161
extra wide (to tie)		4260
extra wide (with elastic loops)		4261
3-layered, broad version (with elastic loops)	1000 pieces, (20 PE bags of 50 pieces) bulk packed	42310



## DISPOSABLE FACE MASKS FROM KIMBERLY & CLARK

### Face mask type "Classic"

Our standard program has been extended with the broad "Classic" range. Kimberly & Clark is one of the leading producers of high quality disposable face masks, especially for controlled areas. With the choice of its base materials, production and packaging the highest importance has been put on its cleanroom suitability.

#### Standard design:

- ▶ face mask with high filter efficiency
- ▶ for tying or with elastic loops
- ▶ sterile or non-sterile version

We recommend the acrylic dispenser box in chapter 15.2.

Type	Fastening	Size (folded)	PU	Art-No.
non-sterile	elastic ear loops	17.5 x 9 cm	10 x 50 pieces	43410
non-sterile	ties	17.5 x 9 cm	10 x 50 pieces	43420
non-sterile	elastic ear loops	23 x 9 cm	10 x 50 pieces	43415
non-sterile	ties	23 x 9 cm	10 x 50 pieces	43425
sterile	elastic ear loops	17.5 x 9 cm	10 x 20 pieces*	44810
sterile	ties	17.5 x 9 cm	10 x 20 pieces*	44820
sterile	ties	23 x 9 cm	10 x 20 pieces*	44830

\* single packed





## HOLDING CLIP FOR FACE MASKS WITH EAR LOOPS

A useful aid to fix face masks with ear loops at the back of the hood. With this accessory the changing of face masks becomes very easy, additionally the vario adjustable band makes a comfortable individually adjustment possible.

Article	PU	Art.-No.
Vario-adjustable band for face mask with ear loops	2500 pieces (10 bags of 250 pieces)	44444



## FACE VEIL/RANGER

This face mask made from very soft polyethylene is for users for whom the wearing comfort is more important than highest cleanroom compatibility. The veil is available with press buttons or elastic band.

Article	Fastening	Length	PU	Art.-No.
Ranger	with press button	15"	6 x 25 pieces	43520
Ranger	with elastic band	15"	6 x 25 pieces	43530



## DISPOSABLE FACE MASK PROGRAM “DUCK BEAK”

This face mask with its special design completes our standard face mask program.

### Advantages:

- ▶ the user does not come directly in to contact with the humid face mask
- ▶ improved wearability
- ▶ higher wearing comfort

A sterile version with extended fleece protection at front is also available.

We recommend the acrylic dispenser box in chapter 15.2.

Article	Size (folded)	PU	Art.-No.
Elastic head bands, non-sterile	approx. 25 x 10 cm	6 x 50 pieces	43910
With bib, elastic head bands, sterile	approx. 25 x 10 cm	10 x 20 pieces	44911

## DISPOSABLE FACE MASK WITH INTEGRATED SYNTHETIC VISOR

This face mask has been created especially for areas where the users need a full cover of the face. The highest importance is put on the cleanroom suitability during production and packaging.

### Advantages:

- ▶ visor with anti-fogging coating
- ▶ extended field of vision (in comparison with safety goggles)
- ▶ higher wearing comfort
- ▶ individually packed

When wearing a full cover hood with eye slits, we offer also a visor (without mask) as an alternative for the classical safety goggles.

Fastening	Type	Size	Height	PU	Art.-No.
Mask with visor for tying	sterile	30 x 19 cm	approx. 9 cm	5 x 20 pieces	43720
All-round visor for tying	sterile	30 x 14 cm	approx. 14 cm	50 x 20 pieces	43790



## AUTOCLAVABLE SAFETY GOGGLES

In aseptic areas it is more and more important to cover the eyes in order to achieve optimum protection from contamination. This can be achieved with an autoclavable goggle or with visor (see 6.7).

### Technical data on request

Article	Colour	PU	Art.-No.
Safety goggle Ultrasonic with elastic headband	■	4 pieces	40890
Replacement glass for Ultrasonic		10 pieces	40889
Safety goggles with neoprene headband	■	5 pieces	40861
Safety goggle "Polysafe"		10 pieces	

■ blue ■ grey ■ black





## TYVEK® DISPOSABLE CLOTHING

Tyvek® is the most commonly used material for high quality disposable clothes (coveralls, coats, etc.) in cleanrooms. It is virtually impermeable to particles, anti-statically treated and partially resistant to splashes. In addition Tyvek® combines high abrasion resistance with high tensile strength.

(Please see chapter 6.2 for more details to cleanroom compatibility)

Article	Colours	PU	Art.-No.		
Coverall (Industry)	<input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	100 pieces	4001		
Coverall with integrated hood (classic)	<input type="checkbox"/> <input checked="" type="checkbox"/>	100 pieces	4004		
Coverall with integrated hood & sock liner, welded seams	<input type="checkbox"/>	80 pieces	40015		
Coverall with integrated hood, welded seams "Classic Plus"	<input type="checkbox"/>	100 pieces	40041		
Coat, 3 pockets, press buttons in front <sup>1</sup>	<input type="checkbox"/>	50 pieces	4003		
Coat, no pockets, press buttons in front	<input type="checkbox"/>	200 pieces	40031		
Trousers, elastic at waist, press button in front	<input type="checkbox"/>	100 pieces	4005		
<input type="checkbox"/> white <input checked="" type="checkbox"/> blue <input checked="" type="checkbox"/> green					
Sizes	Body size	Chest m.	Sizes	Body size	Chest m.
S	162–170 cm	84– 92 cm	XL	180–188 cm	108–116 cm
M	168–176 cm	92–100 cm	XXL	186–194 cm	116–124 cm
L	174–182 cm	100–108 cm	XXXL	192–200 cm	124–132 cm

The sizes listed here are based on manufacturing description and are not binding.  
<sup>1</sup> Only available from size M onwards.

**Disposable clothing can also be delivered sterile – singly or packaged as a set – on request.**

### Additional products made of Tyvek®:

Article	colour	PU	Art.-No.
Apron, with ties	<input type="checkbox"/> white	100 pieces	4075
Hood with shoulder cover	<input type="checkbox"/> white	100 pieces	4052
Sleeve protectors	<input type="checkbox"/> white	200 pieces	4072
Overshoes, low version	<input type="checkbox"/> white	200 pieces	4031
Overboots, high version	<input type="checkbox"/> white	200 pieces	4032
Overboots, high version with adhesive, antistatic sole	<input type="checkbox"/> white	100 pieces	40321
Size: universal			

Tyvek® is a Trademark of DuPont.



4001



4003



4004

table of cleanroom classes  
see chapter 6.12

## ALTERNATIVES TO TYVEK® DISPOSABLE CLOTHING

Besides Tyvek® from DuPont other well-known manufactures also offer a large choice and quantity of disposable clothing. Do these alternatives comply to your requirements? This ought to be thought through so that the usage of these products won't represent a risk. (Please refer to chapter 6.2)

Below you will find a small variety of different brands and designs, which can be extended on request.



1 disposable sleeve cover from Macrobond, extra long version, with elastic

2 KLEENGUARD® T65 Combi

3 typical protective coverall (without breathable back) after 10 minutes of physical hard work

4 KLEENGUARD® T65 Combi (with breathable back) after 10 minutes of physical hard work

Source for pictures 2, 3 and 4: Kimberly-Clark Professional Europe

table of cleanroom classes see chapter 6.12

Article	Colours	Sizes	PU	Art.-No.
Coverall Macrobond with integrated hood, covered tippes & knitted cuffs on arms	<input type="checkbox"/>	M-XXL	25 pieces	40081
Coverall Candour with integrated hood, covered tippes & knitted cuffs on arms	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	M-XXL	25 pieces	40083
Coverall KLEENGUARD® T65 Combi with integrated hood	<input type="checkbox"/>	S-XXXL	25 pieces	40048
Coverall KLEENGUARD® T65 XP with integrated hood	<input type="checkbox"/>	S-XXXL	25 pieces	40049
Coat Macrobond, covered zipper in the front & knitted cuffs on arms	<input type="checkbox"/>	M-XXL	50 pieces	40095
Coat, simple PP 50 g/m², press buttons in front, elastic cuffs at arms	<input type="checkbox"/>	M-XXL	50 pieces	4006
Coat, simple PP 50 g/m², zipper in front, elastic cuffs at arms	<input type="checkbox"/> <input type="checkbox"/>	M-XXL	50 pieces	40061
Disposable sleeve cover, Macrobond extra long version, elastic (60 cm)	<input type="checkbox"/>	uni	300 pieces	40746
Disposable sleeve protector, Candour with knitted cuffs (45 cm)	<input type="checkbox"/>	uni	300 pieces	40745

white  blue  red  green



## DISPOSABLE OVERSHOES

Article	Base material	Colours	PU	Art.-No.
Overshoes with carbon strip, conductive	fleece material	■ blue	600 pieces	40385
Standard overshoes	PP	□ white	240 pieces	4035
Overshoes with reinforced sole	PP	□ white	1000 pieces	4038
Size: universal				



### CPE overshoes and boots:

- ▶ extra long version prevents early tearing when putting the shoes on
- ▶ less wear, especially in the extra strong CPE version
- ▶ semi-high and higher version very useful for wet area

As alternative to disposable overshoes we can also offer the shrink wrapping machine GaloMat® (see chapter 13.11).

Article	Base material	Colours	PU	Art.-No.
Standard 16" (approx. 41 cm)	CPE	■ □ ■	1000 pieces	4030
Reinforced CPE sole 16" (approx. 41 cm)	fleece/CPE	□ ■	1000 pieces	40381
Extra strong CPE* 16" (approx. 41 cm)	CPE	■ □	500 pieces	40390
Slightly adhesive sole 16" (approx. 41 cm)	CPE	■ □	500 pieces	40399
Size: universal		■ blue □ white ■ green		

\* semi-high and high version available on request.

Acrylic dispenser box see chapter 15.





## POWDER FREE LATEX GLOVES

Latex gloves normally fit closely and offer an extremely good sense of touch. They are very flexible and therefore also tear resistant. For aseptic areas some items are offered in a sterile version, in pairs and hand specific (= left/right). For cleanroom applications a minimum length of 11" – 12" should be used, because the gloves then cover the knitted cuffs of the cleanroom garments. It is also important to have plastic packaging suitable for cleanrooms – in particular for the sterile versions. Using a paper packing for gloves, as in those used for medical applications, brings a higher risk of contamination purely from opening the paper packing.

For special applications we also offer additionally 16" long gloves.



1 sterile latex gloves, foil packed  
2 latex glove

3 "double gloving"

Appropriate dispenser units see chapter 15.

Article	Sterile	Manufacturer	Sizes	PU	Art.-No.
Kimtech, Pure Controlled, G5 12", ambidextrous	no	Kimberly & Clark	S, M, L, XL	1000 pieces (10 x 100 pieces per double polybag)	3501
Kimtech, Pure Critical, G3 12", ambidextrous	no	Kimberly & Clark	S, M, L, XL	1000 pieces (10 x 100 pieces per double polybag)	3503
Bioclean 100 BLA 3 16", ambidextrous textured surface	no	Nitritex	S, M, L, XL	1000 pieces (10 x 100 pieces per double polybag)	37021
Kimtech, Pure Controlled, G5 12", left/right	yes	Kimberly & Clark	6, 6½, 7, 7½ 8, 8½, 9, 10	200 pairs pairs wrapped in paper (50 pairs/dispenser box)	3504
Kimtech, Pure Critical, G3 12" left/right	yes	Kimberly & Clark	6, 6½, 7, 7½ 8, 8½, 9, 10	200 pairs pairs wrapped in foil (10 x 20 pairs/PE-bag)	3509
Accutech, sterile Ultra Clean 12", left/right	yes	Ansell	6, 6½, 7, 7½ 8, 8½, 9	200 pairs pairs wrapped in foil (20 x 10 pairs/PE-bag)	3609
Accutech, sterile coated 12", left/right	yes	Ansell	6, 6½, 7, 7½ 8, 8½, 9	200 pairs pairs wrapped in paper (20 x 10 pairs/PE-bag)	3610
Expert OP-glove 11", left/right	yes	Unigloves	6, 6½, 7, 7½ 8, 8½, 9, 10	300 pairs pairs wrapped in paper (50 pairs/dispenser box)	3067
Bioclean 100 BLAS 3 16", ambidextrous textured surface	yes	Nitritex	S, M, L, XL	200 pairs pairs wrapped in foil (20 x 10 pairs/PE-bag)	37025

## POWDER FREE NITRIL GLOVES

This alternative is becoming increasingly commonplace because Nitrile gloves have many advantages. They offer the fit and therefore also the sense of touch of Latex gloves, they are conductive and do not hold the danger of a possible Latex allergy. In comparison with Latex and Vinyl gloves, Nitrile gloves are considered to be the most "clean" or "pure" gloves. Nitrile gloves should also have an appropriate minimum length. They are also available in sterile form packed in PE bags suitable for cleanrooms.

For special applications we also offer additionally 16" long gloves.

**Appropriate dispenser units see chapter 15.**



1 nitrile glove  
2 example of an extra long glove

Article	Sterile	Manufacturer	Sizes	PU	Art.-No.
Kimtech, Pure Critical, G3 12", ambidextrous	no	Kimberly & Clark	XS, S, M, L, XL	1000 pieces (10 x 100 pieces per double polybag)	3522
Kimtech, Pure NxT 12", ambidextrous	no	Kimberly & Clark	XS, S, M, L, L+, XL	1000 pieces (10 x 100 pieces per double polybag)	3523
Bioclean 100 BNAL 16", ambidextrous textured finger	no	Nitritex	S, M, L, XL	1000 pieces (10 x 100 pieces per double polybag)	37089
Nitrilite Silky Ultra Clean 300 mm, ambidextrous	no	Ansell	S, M, L, XL	1000 pieces (10 x 100 pieces per double polybag)	3621
Kimtech, Pure Critical, G3 12", left/right	yes	Kimberly & Clark	6, 6½, 7, 7½, 8, 8½, 9, 10	200 pairs pairs wrapped in foil (10 x 20 pairs/PE-bag)	3529
Bioclean, N-Plus, BNPS 16", left/right textured surface	yes	Nitritex	6, 6½, 7, 7½, 8, 8½, 9, 10	200 pairs pairs wrapped in foil (20 x 10 pairs/PE-bag)	37090



## POWDER FREE VINYL GLOVES

### Co-Polymer gloves

Vinyl do not have such a tight fit as Latex or Nitrile gloves. In contrast to the Latex gloves some of the Vinyl gloves are conductive. They should also have a minimum length of 11" – 12" and be packed in PE-bags suitable for cleanrooms. Vinyl gloves are much cheaper than Latex or Nitrile gloves, but generally not as pure. Some publications have already hinted at possible health risks.



Article	Conductive	Sizes	PU	Art.-No.
Co-Polymer Vinyl glove powder free, 12", ambidextrous	yes	S, M, L, XL	1000 pieces (10 x 100 pieces per double polybag)	3084

## DURACLEAN® GLOVES

DURACLEAN® gloves are a combination made from polyurethane and Lycra and fulfil highest demands. Besides breathability (and hence higher wearing comfort) these gloves also have extremely low particles and ions dispersion. Additionally the outgassing (airborne molecular contamination) is excellent. The ESD capability, the high elasticity and the nearly zero danger of an allergic reaction completes the profile. The excellent technical characteristics and extremely high wearing comfort are unfortunately offset by its high costs, which are shown to be a multiple in a direct comparison with the classical Latex, Nitril and Vinyl gloves.



Article	Conductive	Sizes	PU	Art.-No.
DURACLEAN® Powder free, 12", ambidextrous	yes	S, M, L, XL, XXL	1000 pieces (10 x 100 pieces per double polybag)	37200



## GLOVES FOR SPECIAL USAGE

All materials to be used in a cleanroom have to be designed such that the products enjoy highest possible protection. Contamination, for example caused by personnel, has to be avoided by the usage of appropriate appliances. However, there are always applications where the safety of the human has to be guaranteed as much as that of the products.

Beside the parameter of using cleanroom suitable gloves, one of course has to also look out that the chosen model has characteristics which give the user confidence of not being in any danger of contamination himself.

When using cytotoxins a multitude of factors have to be considered when choosing suitable and safe cleanroom gloves.

What can influence the characteristics of gloves? Besides the mode of operation for the adopted cytotoxins it is mainly the user, the manufacturing process, the operating time, the surrounding temperature, as well as cleaning and disinfection products.

In consequence it is questionable if the current testing method for safety gloves, for example according EN374, goes far enough.

Other additional tests or studies are sensible and essential. The high toxicity of cytotoxins and the demanded cleanroom classes don't allow compromises. Can the ASTM D 6978-5 help further? Hereby gloves are tested at 35 °C and not room temperature. Permeation is already started at 0.01 µg and not later at 1.0 µg. Additional praxis oriented differences mark the above mentioned ASTM directive as superior to the existing recognised parameters .

More and more manufacturers accepting the challenge to offer cleanroom suitable gloves for the use with cytotoxins.

Some of them are listed below:

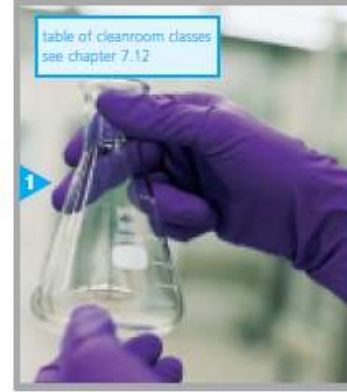
- ▶ Derma – Shield
- ▶ SHIELDskin™
- ▶ P-Zero
- ▶ Ultimate
- ▶ Emerald
- ▶ Nitril Critical
- ▶ Latex Critical
- ▶ Purple Nitril Xtra

For questions on the above mentioned models and /or any other products, as for example the appropriate clothing for working with cytotoxins, please do not hesitate to contact us for further information.



## GLOVES PACKED IN BOXES

In the less sensitive area outside the cleanroom, the use of gloves packed in a box (light carton) becomes a possibility – and has the advantage of reduced costs. In general these gloves are shorter than the gloves suitable for cleanrooms and for health reasons also powder free. We offer Latex as well as Nitril versions.



1 box packed gloves Kimtech Science Purple Xtra

Article	Manufacturer	Sizes	PU	Art.-No.
Latex glove, Kimtech Science Satinplus 9", powder free, ambidextrous smooth surface	Kimberly & Clark	XS, S, M, L, XL	1000 pieces (900 pieces by XL) 100 pieces per dispenser box (90 pieces by XL)	3530
Latex glove, Kimtech Science PFE 9", powder free, ambidextrous textured surface	Kimberly & Clark	XS, S, M, L, XL	1000 pieces (900 pieces by XL) 100 pieces per dispenser box (90 pieces by XL)	3531
Latex glove, Kimtech Science PFE Xtra 11", powder free, ambidextrous	Kimberly & Clark	XS, S, M, L, XL	500 pieces 50 pieces per dispenser box	3535
Nitril glove, Kimtech Science Purple 9.5", powder free, ambidextrous	Kimberly & Clark	XS, S, M, L, XL	1000 pieces (900 pieces by XL) 100 pieces per dispenser box (90 pieces by XL)	3540
Nitrilglove, Kimtech Science Purple Xtra 12", powder free, ambidextrous	Kimberly & Clark	XS, S, M, L, XL	500 pieces 50 pieces per dispenser box	3541

## GLOVES PACKED IN BOXES

With the delivery program of the manufacturer Shield Scientific we are also offering box packed gloves, from which some are tested according to AQL 0,65. (This means for the user more safety and better quality).

We can also deliver gloves for laboratory areas, which have the required minimum length of 250 and 260 mm respectively (see EN 374-1:2003 and EN 420 respectively).

Appropriate dispenser units see chapter 15.



1 duoShield ICE™ Nitril 240  
2 SHIELDskin™ orange Nitril 300

Article	Product	Sizes	PU	Art.-No.
Nitril glove, powder free 300 mm, ambidextrous	SHIELDskin™ orange Nitril 300	XS, S, M, L, XL	500 pieces 50 pieces per dispenser box	3841
Nitril glove, powder free 260 mm, ambidextrous	SHIELDskin™ orange Nitril 260	XS, S, M, L, XL	900 pieces 90 pieces per dispenser box	3840
Nitril glove, powder free 300 mm, ambidextrous, sterile	SHIELDskin™ orange Nitril 300 sterile	XS, S, M, L, XL	160 pairs (in pairs, wrapped in foil) 40 pairs per dispenser box	3828
Latex glove, powder free 300 mm, ambidextrous	BRIGHT Latex 300	XS, S, M, L, XL	500 pieces 50 pieces per dispenser box	3835
Nitril glove, powder free 240 mm, ambidextrous	duoSHIELD ICE™ Nitril 240	XS, S, M, L, XL	1000 pieces 100 pieces per dispenser box	3845
Latex glove, powder free 240 mm, ambidextrous	duoSHIELD PF™ Latex 240	XS, S, M, L, XL	1000 pieces 100 pieces per dispenser box	3831
Latex glove, powder free 240 mm, ambidextrous	duoSHIELD Smooth™ Latex 240	XS, S, M, L, XL	1000 pieces 100 pieces per dispenser box	3830



## DISPOSABLE GLOVES FOR CHEMICALS

When using chemicals the demands on disposable gloves are very different. Which chemicals are in use, their concentration and duration of contact (i.g.: splash or immersion) are all contributory factors.  
For more information please require the corresponding chemical resistance guide for the appropriate glove.



Article	Material thickness	Manufacturer	Sizes	PU	Art.-No.
Latex glove, powder free 12", left/right	0.35 mm	Marigold	S, M, L, XL	12 pairs	3078
Tri-Polymer glove, Trionic 517, powder free, 360 mm, left/right	0.50 mm	Mapa	7, 7½, 8, 8½, 9, 9½	72 pairs	3774
Tri-Polymer glove, Bioclean Solac, powder free, 400 mm, left/right	0.34 mm	Nitritex	6, 7, 8, 9, 10, 11	72 pairs	30750
Solvex glove, 37-675, powder free, 330 mm, left/right	0.38 mm	Ansell	6, 7, 8, 9, 10, 11	144 pairs	37760
Solvex glove, 37-185, powder free, 455 mm, left/right	0.56 mm	Ansell	6, 7, 8, 9, 10, 11	144 pairs	37761

## KNITTED TEXTILE GLOVES

These knitted gloves do not have any disturbing seams, particularly on the fingertips, and therefore the sense of touch is improved. The conductive material used in our gloves is copper (carbon versions on request). The copper version offers better value for conductivity and longevity.



Article	Sizes	PU	Art.-No.
Polyamide-stretch-glove without coating	S, M, L, XL, XXL	10 pairs*	3030
Nylon-stretch-glove 1/2-finger, without coating	S, M, L, XL, XXL	10 pairs*	3031
Polyamide-stretch-glove without coating (suitable for ESD)	S, M, L, XL, XXL	10 pairs*	3032
Polyamide-stretch-glove with PU coated fingertips	S, M, L, XL, XXL	10 pairs*	3010
Polyamide-stretch-glove with PU coated fingertips (suitable for ESD)	S, M, L, XL, XXL	10 pairs*	3011
Polyamide-stretch-glove with PU coated palm	S, M, L, XL, XXL	10 pairs*	3015
Polyamide-stretch-glove with PU coated palm (suitable for ESD)	S, M, L, XL, XXL	10 pairs*	3016
Stretch-glove made from Dynemafibre® with PU coated palm	S, M, L, XL	10 pairs*	3019
Polyamide-stretch-glove with PU coated palm with PVC burl	S, M, L, XL, XXL	10 pairs*	3034

\* Cleanroom suitable packed in PE-bag.

Appropriate dispenser units see chapter 15.

- 1 glove with PU coated fingertips
- 2 stretch glove without coating
- 3 glove suitable for ESD
- 4 glove with PU coated palm
- 5 glove with 1/2-finger for underneath
- 6 polyamide-stretch-glove with PVC burl

## SEWN TEXTILE GLOVES

For these gloves various materials for palm and overhand can be combined. Tight synthetic coatings for the product sides and air permeable knitwear on the back of the hand.

For activities that require a very acute sense of touch, seams can be disturbing. In such cases we would recommend the knitted gloves in Chapter 7.9.



Article	Sizes	PU	Art.-No.
Synthetic-stretch-knitwear (Polyamide)	7 – 14	12 pairs	3001
Perlonfilet with artificial leather coating on palm	7 – 13	12 pairs	3002
Synthetic-stretch-knitwear (Polyester) more robust than article 3001	7 – 13	12 pairs	3003
Polyester-stretch-knitwear with antistatic steel fibre	7 – 13	12 pairs	3004
Simple, synthetic glove without coating	S, M, L, XL	10 pairs	3007
Synthetic glove with breathable polymer coating on palm	S, M, L, XL	10 pairs	3009
Synthetic glove with PU burls coating on palm & antistatic carbon fibre on back of hand	S, M, L, XL	10 pairs	3020

## OTHER GLOVES

Besides the models introduced so far there is still a multitude of other varieties, as for example so called isolator-gloves and also cleanroom suitable, textile heat or cold resistant gloves.



Article	Sizes	PU	Art.-No.
Heat safety glove made from Nomex® and conductive yarn, 26 cm long	M, L, XL, XXL	1 pair	30900-26
Heat safety glove made from Nomex® and conductive yarn, 40 cm long	M, L, XL, XXL, XXXL	1 pair	30900-40



## POWDER FREE FINGER COTS

Normally finger cots are made from Latex or Nitril and give a good sense of touch. Different models distinguish themselves from each other in material thickness, which makes them usable for sharp products

Finger cots are used in workplaces with low cleanroom demands. They are differentiated as follows:

- ▶ non-conductive finger cots
- ▶ antistatic finger cots with a maximum surface resistance of  $10^{10}$  Ohms as declared by the manufacturer
- ▶ finger cots with high conductivity, mostly in black, with a surface resistance of appr.  $2 \times 10^6$  Ohms as declared by the manufacturer



finger cots in various designs

Article	Colour	Sizes	PU	Art.-No.
Powder free, rolled, normal non-conductive finger cots, latex	☐ natural	S, M, L, XL	1440 pieces per PE bag	402001
Powder free, rolled, normal antistatic finger cots, latex	☐ pink	S, M, L, XL	1440 pieces per PE bag	40255
Powder free, rolled finger cots high conductivity, latex	■ black	S, M, L, XL	1440 pieces per PE bag	402511
Powder free, rolled nitril finger cots	☐ natural	S, M, L, XL	720 pieces per PE bag	40230

## IMPORTANT INFORMATION ABOUT CLEANROOM PAPER & ACCESSORIES

### General Information

The significance of paper as a particle generating source in cleanrooms is often underestimated. Ordinary paper is made out of cellulose. Hence due to the mechanical abrasion while exposed to writing or printing on it huge numbers of particles are shed. This is particularly true for note books and note pads which could with a simple touch already contribute to the contamination of the cleanroom atmosphere.

To counter this problem we are able to offer you products made of special cleanroom suitable paper for almost every area of application:

- ▶ Copy and printer paper
- ▶ Note books
- ▶ College block
- ▶ File folder
- ▶ Pens

### Cleanroom paper made of treated cellulose, as single sheet or bound

This paper is soaked and coated with a special polymer compound, which avoids high particle emission and chemical vapour release.

The key features are:

- ▶ high tear strength
- ▶ good heat resistance
- ▶ suitable for most copy systems
- ▶ can be written and printed on with almost every media
- ▶ single sheets can be sterilised
- ▶ additionally available are various file folders and college blocks, lined or squared

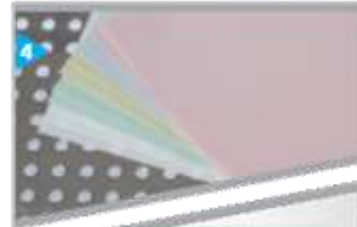
### Cleanroom file folders

Made from special, abrasion resistant polymer (Priplac) Lever arch files with 2 clip lever mechanism made from metal.

Additionally files in ESD version are also available.

### Cleanroom pens

Abrasion resistant fine liner with line width of 0.4 mm and other pens. Available in sterile (singly wrapped) or non-sterile version.



- 1 cleanroom paper and accessories
- 2 college block
- 3 note pad 3" x 5"
- 4 copy and printer paper
- 5 wirebound note book 8.5" x 11"
- 6 file folder
- 7 pen

table of classroom stationery  
see chapter 8.3



## Cleanroom paper as single sheet

Article	Dimension	Print	Colours	PU	Art.-No.
Copy paper	DIN A5	without	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5000 sheets	56200
Copy paper	DIN A4	without	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	2500 sheets	56200
Copy paper	DIN A3	without	<input type="checkbox"/> <input type="checkbox"/>	1500 sheets	56200
<input type="checkbox"/> white <input type="checkbox"/> blue <input type="checkbox"/> pink <input type="checkbox"/> yellow <input type="checkbox"/> green					

## Cleanroom college block (50 sheets)

Article	Dimension	Print	Colours	PU	Art.-No.
College block	3" x 5"	lined	<input type="checkbox"/> white	50 books	56400
College block	5.5" x 8.5"	lined	<input type="checkbox"/> white	20 books	56400
College block	8.5" x 11"	lined	<input type="checkbox"/> white	10 books	56400
College block	8.5" x 11"	squared	<input type="checkbox"/> white	10 books	56450

## Cleanroom note book (20 sheets)

Article	Dimension	Print	Colours	PU	Art.-No.
Note book	80 x 160 mm	lined	<input type="checkbox"/> white	200 pieces	56700
Note book	DIN A4	lined	<input type="checkbox"/> white	100 pieces	56710

## Cleanroom file folder

Article	Dimension	Print	Colours	Fill height	PU	Art.-No.
Plastic file	DIN A4	without	<input type="checkbox"/> white	40 mm	10 pieces	56900
Plastic file	DIN A4	without	<input type="checkbox"/> white	35 mm	10 pieces	56901
ESD file	DIN A4	without	<input checked="" type="checkbox"/> black	30 mm	10 pieces	56910
ESD file	DIN A4	without	<input checked="" type="checkbox"/> black	50 mm	10 pieces	56911

## Cleanroom Pens

Article	Colours	PU	Art.-No.
Cleanroom pens sterile	<input checked="" type="checkbox"/> blue <input checked="" type="checkbox"/> black	10 pieces	80800
Cleanroom pens sterile (fine liner)	<input checked="" type="checkbox"/> blue	10 pieces	56010
Cleanroom pens non-sterile (fine liner)	<input checked="" type="checkbox"/> blue	10 pieces	56015



## IMPORTANT INFORMATION ABOUT CLEANROOM WIPES

### General Information

In almost every cleanroom, special wipes are used for a variety of applications. When searching for an appropriate wipe you should define which requirements the wipes should fulfill:

- ▶ Is the wipe supposed to be for dry or for wet cleaning?
- ▶ Should the wipe be especially low in particle emission?
- ▶ Should it be a soft wipe, which does not scratch the product?
- ▶ Should the wipe be resistant against chemicals?
- ▶ Can the surface or the item to be cleaned damage the wipe?

**Many of our wipes have been evaluated according to the above mentioned criteria. You can find individual evaluations on their packaging and also on the following pages.**

As wipes have many different applications, we offer you a variety of cleanroom wipes made of a number of basic materials, which are produced by varying manufacturing methods.

The most important base types are:

- ▶ Cotton
- ▶ Cellulose
- ▶ Polyester/cellulose blend
- ▶ Polyester
- ▶ Micro fibre
- ▶ Polypropylene
- ▶ Nylon
- ▶ Polyurethane foam, etc.
- ▶ Saturated wipes mainly made of polypropylene

Within our standard product range we cover the most common requirements for cleanrooms. In addition, for special cases, we work closely with national and international wipe manufacturers with whom we develop individual customer specific solutions. Their full range is available through **dastex**. Some special wipes from LymTech, Contec, Milliken and Kimberly-Clark will also be introduced in more detail in the following chapter.

In order to make a decision about which wipe is the most suitable for your application, beside the technical data, you should also test in practice at the work place.

- ▶ For this we would be pleased to put samples at your disposal
- ▶ Detailed technical data sheets about our cleanroom wipes are also available on request at any time.



the red dot as sterility indicator



## COTTON WIPES

- ▶ relatively heat resistant
- ▶ neutral static charge
- ▶ adequately absorbent
- ▶ mostly acid and solvent resistance

Gamma sterilised wipes also in other dimensions are available on request.



1 typical standard sizes  
6" x 6", 9" x 9", 12" x 12"

Product characteristics	Dimensions	PU	Art.-No.
<b>Series - 100 *1</b> Twill woven cotton wipes 100 % cotton	4" x 4"	1200 pieces	55 100 0404
	6" x 6"	600 pieces	55 100 0606
	9" x 9"	300 pieces	55 100 0909
	12" x 12"	150 pieces	55 100 1212
	17" x 17"	150 pieces	55 100 1717
<b>Series - 101</b> "Non-woven" wipes made from 100 % Rayon, a cotton derivation. The absorbency of Rayon is much better than cotton.	9" x 9"	300 pieces	55 101 0909
	12" x 12"	150 pieces	55 101 1212

\*1 – sample card chapter 9.10

## ADHESIVE WIPE GENTEX 160

Our GENTEX 160 is made from cotton – gauze cloth and impregnated with synthetic resin. It is designed to remove dust particles from surfaces such as wood, metal, plastic etc. The dust particles adhere to or remain in the wipe can be removed easily.

Product characteristics	Dimensions	PU	Art.-No.
GENTEX 160, folded	22 x 21 cm	500 pieces (5 PE-bags x 100)	53160

## CELLULOSE WIPES

- ▶ good absorbency in relation to mass per unit area
- ▶ economical
- ▶ neutral static charge

Gamma sterilised wipes also in other dimensions are available on request.



1 typical standard sizes  
6" x 6", 9" x 9", 12" x 12"

Product characteristics	Dimensions	PU	Art.-No.
<b>Series - 200*1</b> Cellulose wipes	6" x 6"	500 pieces	55 200 0606
	9" x 9"	500 pieces	55 200 0909
	12" x 12"	500 pieces	55 200 1212
	18" x 18"	500 pieces	55 200 1818
<b>Bemcot M3</b> Cellulose wipes (synthetic cellulose), acetone resistant, especially useful for CD and DVD production	25 x 25 cm 4 times folded: 10 x 10 cm	3.000 pieces (30 PE-bags x 100 pieces)	52 302 M3



## POLYESTER-CELLULOSE WIPES

- ▶ relatively good absorbency
- ▶ relatively low emission of particles
- ▶ price-performance ratio



1 fibre structure (Series 300)



2 from top to bottom: wipe of series 305, 304 series and 303 series

Product characteristics	Dimensions	PU	Art.-No.
<b>Series - 300 *1</b> "Non-woven" wipes, 45 % polyester/55 % cellulose.	4" x 4"	1200 pieces	55 300 0404
	6" x 6"	300 pieces	55 300 0606
	9" x 9"	300 pieces	55 300 0909
	12" x 12"	150 pieces	55 300 1212
	18" x 18"	75 pieces	55 300 1818
<b>Series - 301</b> "Non-woven" wipes, 45 % polyester/55 % cellulose, softer grip than series 300.	4" x 4"	1200 pieces	55 301 0404
	6" x 6"	300 pieces	55 301 0606
	9" x 9"	300 pieces	55 301 0909
	12" x 12"	150 pieces	55 301 1212
	18" x 18"	75 pieces	55 301 1818
<b>Series - 302</b> As series 300, but with reduced particle emission.	4" x 4"	1200 pieces	55 302 0404
	6" x 6"	300 pieces	55 302 0606
	9" x 9"	300 pieces	55 302 0909
	12" x 12"	150 pieces	55 302 1212
	18" x 18"	75 pieces	55 302 1818
<b>Series - 303 *1</b> "Non-woven" wipes, 45 % polyester/55 % cellulose with a special twill structured surface which enhances the cleaning process. The construction reduces the risk of "scratching" of the surface when cleaning.	4" x 4"	1200 pieces	55 303 0404
	9" x 9"	300 pieces	55 303 0909
	12" x 12"	150 pieces	55 303 1212
<b>Series - 304 *1</b> As series 301, dyed blue, to make absorbed liquid visible.	4" x 4"	1200 pieces	55 304 0404
	9" x 9"	300 pieces	55 304 0909
	12" x 12"	150 pieces	55 304 1212
<b>Series - 305</b> "Non-woven" wipes, 45 % polyester/55 % cellulose with high absorption capacity, good particle absorbency and low particle emission by abrasion.	4" x 4"	200 pieces	55 305 0404
	6" x 6"	200 pieces	55 305 0606
	9" x 9"	200 pieces	55 305 0909
	12" x 12"	100 pieces	55 305 1212
	18" x 18"	50 pieces	55 305 1818

## POLYESTER WIPES

- ▶ low emission of particles
- ▶ softness
- ▶ robustness



1 fibre structure (series 405)

2 laser edge (series 405)

Design / Product characteristics	Dimensions	PU	Art.-No.
<b>Series - 401*1</b> "Non-woven" wipes, 100 % polyester hydro entangled, without chemical binding agent, special soft fleece for cleaning of scratch sensitive surfaces.	4" x 4"	1200 pieces	55 401 0404
	6" x 6"	300 pieces	55 401 0606
	9" x 9"	300 pieces	55 401 0909
	12" x 12"	150 pieces	55 401 1212
<b>Series - 402</b> Knitted from 100 % polyester endless filament, specially cleaned, packaged in cleanroom class ISO 4.	4" x 4"	600 pieces	55 402 0404
	9" x 9"	150 pieces	55 402 0909
	12" x 12"	100 pieces	55 402 1212
<b>Series - 403</b> As series 402, but lighter.	4" x 4"	600 pieces	55 403 0404
	6" x 6"	300 pieces	55 403 0606
	9" x 9"	150 pieces	55 403 0909
	12" x 12"	100 pieces	55 403 1212
<b>Series - 405</b> Knitted from 100 % polyester endless filament, sealed cut edges "Sealed-Edge-Technology", reduced particle and fibre emission, highest standard for extremely low particle cleanroom wipes, specially cleaned, packaged in cleanroom class ISO 4.	9" x 9"	150 pieces	55 405 0909
	12" x 12"	75 pieces	55 405 1212
<b>Series - 406 *1</b> As series 402, but not specially cleaned.	4" x 4"	600 pieces	55 406 0404
	9" x 9"	150 pieces	55 406 0909
	12" x 12"	100 pieces	55 406 1212
<b>Series - 409</b> Knitted from 100 % polyester endless filament, specially cleaned, packaged in cleanroom class ISO 4, with carbon fibres to prevent/reduce static charge.	9" x 9"	150 pieces	55 409 0909
	12" x 12"	100 pieces	55 409 1212
<b>Series - 410 *1</b> Double layer wipes, knitted of 100 % polyester endless filament, improved absorbency, very low particle emission, sealed cut edges "Sealed-Edge-technology", specially cleaned, packaged in cleanroom class ISO 4.	4" x 4"	300 pieces	55 410 0404
	9" x 9"	100 pieces	55 410 0909
	12" x 12"	100 pieces	55 410 1212
	12" x 6"	100 pieces	55 410 1206
	16" x 6"	100 pieces	55 410 1606
<b>Series - 411</b> As series 403, dark blue dye to make clear particles apparent.	9" x 9"	150 pieces	55 411 0909



## CLEANROOM WIPES FOR SPECIAL DEMANDS

Besides the four basic types of wipes we offer also cleanroom wipes made of other base materials.

**Gamma sterilised wipes also in other dimensions are available on request.**



1 surface structure (series 700)  
2 various sizes

Product characteristics	Dimensions	PU	Art.-No.
<b>Series - 420</b> Micro fibre wipes, with sealed edge good absorbency, low particle abrasion, for extremely clean demands.	23 x 23 cm	100 pieces	55 420
	30 x 30 cm	500 pieces	55 420
	50 x 50 cm	500 pieces	55 420
<b>Series - 600</b> Foam wipes made of polyurethane, tear resistant, no crumbling, mainly solvent resistant, especially suitable for oil and pastes.	4" x 4"	100 pieces	55 600 0404
	6" x 9"	25 pieces	55 600 0609
<b>Series - 700 *1</b> Outer material made of polypropylene, core made of cellulose, high absorbency, liquids which be soaked up within the core while the polypropylene surface remains mainly dry, good tensile strength, recommended for work with acids.	8" x 9"	100 pieces	55 700 0809
	11" x 12"	100 pieces	55 700 1112
<b>Series - 704</b> Polypropylene wipes from Kimberly-Clark, Kimtech Pure, CL4, high absorbency, for work with acids, alkali and solvents recommended.	9" x 9"	500 pieces	55 704 0909
	12" x 12"	500 pieces	55 704 1212
<b>Series - 706</b> "Non-woven" wipes, from 100 % polypropylene, structured surface, high absorbency, good particle absorption, low abrasion.	42 x 40 cm	420 pieces	55 706
<b>StatZorb®</b> Polyester wipes from Contec with antistatic fibres, conductive.	9" x 9"	12 x 150 pcs.	51 344
<b>Anticon®100 Standard Weight with P.A.T.</b> Polyester wipe with sealed edges from Milliken with special finish (P.A.T. = particle attraction technology) for a high cleaning efficiency. These wipes are cleaned and packaged in cleanroom conditions.	9" x 9"	14 x 150 pcs.	51MI-493300



## STERILE WIPES

**In general all wipes are available in sterile versions on request.**

Knitted wipes made of 100 % polyester can be autoclaved by the users themselves. For gamma sterilised wipes, products made of polyester-cellulose blends have become the established form on the market.

**Application area:**

- ▶ pharmaceutical industry and related areas

**Advantages:**

- ▶ ready to use
- ▶ no time-consuming and cost-intensive preparatory works
- ▶ 25 pieces packed in a PE bag
- ▶ various bags bundled in an additional PE bag and gamma sterilised per box
- ▶ the red dot on each bag acts as an indicator for quality control
- ▶ each batch is documented with a number referencing a particular certificate of sterilisation allowing each batch to be traced back

**Gamma sterilised wipes and wipes with other dimensions are available on request.**



indicator point for sterile products

Product characteristics	Dimensions	PU	Art.-No.
<b>Series - 300</b> "Non-woven" wipes, 45 % polyester/55 % cellulose.	9" x 9"	150 pieces	57 300 0909
	12" x 12"	150 pieces	57 300 1212
	18" x 18"	75 pieces	57 300 1818
<b>Series - 302</b> Similar to series 300, but with lower particle emission.	6" x 6"	200 pieces	57 302 0606
	9" x 9"	150 pieces	57 302 0909
	12" x 12"	150 pieces	57 302 1212
	18" x 18"	75 pieces	57 302 1818
<b>NP - Series (Contec)</b> Sterile, endotoxin free wipes (non-pyrogenic) made from "non-woven" polyester/rayon-mix, low particle abrasion.	9" x 9"	10 x 100 pieces	57 NP 307 0909
	12" x 12"	10 x 100 pieces	57 NP 307 1212

## IMPREGNATED WIPES STERILE AND NON-STERILE

### Application area:

- ▶ whenever a quick and practical application is required

### Advantages:

- ▶ ready to use
- ▶ no additional cleaning agents in bottles, sprays etc.
- ▶ very easy handling
- ▶ no storage costs for cleaning agents and no time-consuming additional work such as decanting, spraying and soaking



Product characteristics	Sterile	Dimensions	PU	Art.-No.
<b>Series - 707</b> 100 % polypropylene ("non-woven"), impregnated with 70 % Isopropanol/30 % DI-water.	No	9" x 11"	8 bags of 30 pieces	58 707
<b>Prosat® 911</b> 100 % polypropylene ("non-woven"), impregnated with 70 % Isopropanol/30 % DI-water.	No	9" x 11" 16" x 17"	50 bags of 30 pieces 15 bags of 50 pieces	58 801 58 801
<b>Prosat® 850</b> As Prosat® 911, just other packaging unit and different dimensions.	No	8" x 8"	50 bags of 50 pieces	58 802
<b>Prosat® 70/30 IR Sterile</b> 100 % polyester ("non-woven"), sterile impregnated with 70 % IPA/30 % DI-water. Sterilisation by electron beam radiation.	Yes	9" x 9"	40 bags of 20 pieces	59 803
<b>Prosat® Sterile</b> As Prosat® 911, but sterile. Sterilisation by electron beam radiation.	Yes	9" x 11"	48 bags of 30 pieces	59 801
<b>PSC 20005</b> Polyester/cellulose ("non-woven"), impregnated with 70 % IPA/ 30 % DI-water, sterile.	Yes	9" x 11"	28 bags of 50 pieces	59 808
<b>Kimtech Pure, CL4, impregnated</b> 100 % polypropylene ("non-woven"), impregnated with 70 % ISO/30 % DI-water.	No	9" x 11"	10 bags of 40 pieces	58 809
<b>Kimtech Pure, CL4, impregnated, sterile</b> 100 % polypropylene ("non-woven"), impregnated with 70 % ISO/30 % DI-water.	Yes	9" x 11"	10 bags of 40 pieces	59 809
<b>Millimoist™ Captura™</b> A Milliken wipe based on Bemliese®-Rayon-Technology (a 100 % endless fibre with "natural" characteristics, similar to cellulose), impregnated with 70 % IPA/30 % DI-water (sterile available on request).	No	9" x 11"	50 bags of 30 pieces	51MI-497100



## SPONGES AND SPONGE WIPES

### DASTCLEAN MICROPORE

- ▶ made of PVA (Poly-Vinyl-Alcohol)
- ▶ high abrasion resistant
- ▶ because of the very fine pore-structure, capillary action enables the capture of even minute dust particles
- ▶ the labyrinth system effectively retains these particles
- ▶ for repeated use and therefore highly economical

Before using DASTCLEAN MICROPORE sponges and sponge wipes for the first time they have to be washed.

- ▶ Additional technical data for DASTCLEAN MICROPORE sponges and other sponge wipes are available on request.



- 1 sponges with different pore structures (Art.-No. 90125 + 90203)  
2 heavy duty sponge wipe for the cleaning of large areas (Art.-No. 90100)

Article	Product characteristics / Application	Dimensions	PU	Art.-No.
DXD - 20	very small pore structure, mainly recommended for precision cleaning.	230 x 230 x 2 mm	25 pieces	90204
DXE - 20	slightly larger pore structure, mainly recommended for the cleaning of equipment and tools.	230 x 230 x 2 mm	25 pieces	90203
DXS - 100	mainly used for the cleaning of larger surfaces as well as walls and floors.	430 x 325 x 1,5 mm	10 pieces	90100
DXD - 125	sponge for the absorption larger quantities of liquid, with good particle binding.	125 x 85 x 35 mm	10 pieces	90125



## SWABS

### Application area:

Cleaning of difficult and inaccessible parts of machines, products, etc.

### Material and workmanship:

In a similar manner to the wipes there are a number of different base materials, which can be used and which can be combined if necessary. Due to the variety of shapes and sizes an optimal swab for each application is available.

### Cotton core with 100 PPI-foam coating:

Swabs with a cotton centre wrapped in a 100 PPI foam. The absorbed liquid is retained in the cotton centre giving a higher absorbency than swabs made out of pure foam.

### Foam 100 PPI:

The swabs are made of special open cell foam with 100 pores per square inch (100 PPI). This "pore-and-open cell" structure absorbs particles particularly well. The material is extremely robust and has low abrasion

### Knitted 100 % polyester swabs (polyester endless filament):

They are robust in use with very low emission of particles and excellent "rubbing" and cleaning characteristics.

► Further types and variations, such as ESD-swabs, antistatic or saturated swabs are available on request.



Article	Diameter of Head	Length of Head	Handle length	Material	PU	Art.-No.
Cotton core with 100 PPI foam coating	Ø 4,8 mm	11 mm	100 mm	plastic	500 pieces	55920
	Ø 6,4 mm	22 mm	150 mm	plastic	500 pieces	55920
	Ø 9,5 mm	25 mm	150 mm	plastic	500 pieces	55920
Foam (100 PPI)	Ø 3,2 mm	13 mm	100 mm	plastic	500 pieces	55930
	Ø 4,8 mm	11 mm	150 mm	plastic	500 pieces	55930
	Ø 6,4 mm	19 mm	115 mm	plastic	500 pieces	55930
	16 x 8 mm	25 mm	130 mm	plastic	500 pieces	55930
Knitted Polyester	Ø 1,6 mm	13 mm	75 mm	plastic	500 pieces	55940
	Ø 3,2 mm	13 mm	75 mm	plastic	500 pieces	55940
	Ø 6,4 mm	19 mm	150 mm	plastic	500 pieces	55940

## CLEANING LIQUID DASTCLEAN 100

- ▶ antistatic cleaning liquid concentrate, based on Sulfoxonium-Sulphates, CFC-free
- ▶ for cleaning of floors, walls, ceilings, machines, workbenches, etc.
- ▶ the concentrate has to be diluted in situ with "soft" or de-ionised water
- ▶ with an economical ratio of 1:15 to 1:20 DASTCLEAN 100 is very effective
- ▶ 1 litre of this concentrate is sufficient to clean approximately 500 m<sup>2</sup> (figures given by manufacture)



PU	Art.-No.
1-litre bottle	93100
5-litre can	93500

## DAST ROLLS

DAST ROLLS have been developed for effective dry cleaning and are used in a similar manner to a paint roller across dirty surfaces. The adhesive foil (silicon-free) collects even the smallest particles. Once soiled it is easily and simply removable at the perforation allowing to continue the cleaning with a new foil.

### DAST HARD ROLLS

- ▶ plain, solid foil

### DAST SOFT ROLLS

- ▶ foamed, soft foil

Material	Width	Layers x Length	Centre Ø	PU	Art.-No.
DAST SOFT ROLL	9" (23 cm)	20 12" (30 cm)	1,5" (38 mm)	4 pieces	95 100 0912
DAST SOFT ROLL	12" (30 cm)	20 16" (40 cm)	3" (76 mm)	4 pieces	95 100 1216
DAST SOFT ROLL	18" (46 cm)	20 16" (40 cm)	3" (76 mm)	4 pieces	95 100 1816
DAST HARD ROLL	12" (30 cm)	60 11" (28 cm)	3" (76 mm)	4 pieces	95 200 1214
DAST HARD ROLL	18" (46 cm)	60 11" (28 cm)	3" (76 mm)	4 pieces	95 200 1814
DAST HARD ROLL	25 cm	30 m (perforated)	1,5" (38 mm)	12 pieces	94 250 0000
Handle for rolls with core diameter Ø 1,5" (38 mm)				1 piece	95 301 0000
Handle for rolls with core diameter Ø 3" (76 mm)				1 piece	95 302 0000
Extension 3" up to 6" (approx. 91 up to 183 cm)				1 piece	95 400 0000

## CLEANROOM VACUUM CLEANER

Table of Cleanroom classes  
see chapter 10.8

### Properties:

Vacuum cleaners for cleanrooms are a complete system. The absolute filter power efficiency as well as the suitability for cleanrooms of all used materials have to be considered.

In our standard program we offer the industry cleaner GM 80, which can be used in cleanrooms with an additional HEPA filter installed (accessory).

► Additional models and extra accessory available on request.



Article	Voltage	Suction	Capacity	Height	Width	Weight	Art.-No.
GM 80	230 Volt	2.340 l/min	12 litre	411 mm	300 mm	5 kg	29010

Accessories (has to be ordered separately)	Art.-No
Downstream HEPA filter	29130
Ground nozzle with castors, 370 mm	29100
Filter bags (single), 5 bags per PU or special filter bags (Toner), 1 bag per PU	29160 29140
Tube extension (stainless steel) approx. 56 cm	29110

## ISOLATOR CLEANING TOOL

- two-part cleaning instrument made from stainless steel
- sterile, suitable for cleanrooms, double packed
- autoclavable
- total length approx. 600 mm, additional extension available, if necessary
- the disposable cleaning pad is made of Polyester-Cellulose (non-woven) or 100 % Polyester. Single packed, suitable for cleanrooms, sterile

Article	PU	Art.-No
Isolator Cleaning Tool	1 piece	80290
Handle extension	1 piece	80291
Cleaning pad (Polyester-Cellulose), sterile	20 pieces	80292
Cleaning pad (100 % Polyester); sterile	20 pieces	80293





## STERILE IMPREGNATED WIPES AND MOP WIPES

- ▶ various packing units
- ▶ impregnated with alcohol, biocides or neutral detergents
- ▶ various application areas

Matching mops and mop holders see chapter 10.7.

table of cleanroom classes  
see chapter 11.10



1 KlenWipe-CR Biocide A – D wipe  
2 mop with floor wipe

Products / Ingredients	Size	PU	Manufact. Art.-No.	Art.-No.
Wipe, Biocide A	200 x 200 mm	20 packs x 15 wipes	WPK2515	8071
Wipe, Biocide B	200 x 200 mm	20 packs x 15 wipes	WPK2525	8070
Wipe, Biocide C	200 x 200 mm	20 packs x 15 wipes	WPK2535	8073
Wipe, Biocide D	200 x 200 mm	20 packs x 15 wipes	WPK2545	8074
Wipe, Neutral Detergents	200 x 200 mm	20 packs x 15 wipes	WPK2551	8072WPK2551
Mop wipe, 70/30 IPA	420 x 250 mm	10 packs x 20 wipes	WPM5000	8070WPM5000
Mop wipe, 70/30 IMS	420 x 250 mm	10 packs x 20 wipes	WPM5005	8070WPM5005
Mop wipe, Biocide A	420 x 250 mm	10 packs x 20 wipes	WPM5015	8070WPM5015
Mop wipe, Biocide B	420 x 250 mm	10 packs x 20 wipes	WPM5025	8070WPM5025
Mop wipe, Biocide C	420 x 250 mm	10 packs x 20 wipes	WPM5035	8070WPM5035
Mop wipe, Biocide D	420 x 250 mm	10 packs x 20 wipes	WPM5045	8070WPM5045
Mop wipe, Neutral detergents	420 x 250 mm	10 packs x 20 wipes	WPM5051	8070WPM5051

## IMPORTANT INFORMATION ABOUT TACKY MATS

### General Information

Tacky mats prevent the unintentional importation of large quantities of particles into the cleanroom on the soles of people's shoes. The combination of a washable permanent adhesive mat and a strongly adhesive peel off tacky mat offers the optimum protection and reduces the running costs.

#### ▶ DASTMAT-100

##### permanently adhesive and washable

This mat is mainly used for the initial, intensive pre-cleaning of the contact surface of the soles. Mostly it is used as first cleaning step before entering the cleanroom. Based on the soft material consistency the sole can be reached in places which are not covered when using the inflexible material of foil mats.

#### ▶ DASTMAT-30, and DASTMAT-60

##### peel off tacky mats

Strong adhesion and robust design make these mats ideal for the cleaning of soles, castors, etc. inside the transfer area.

#### ▶ Frames and movable floor plates

The frame for the foil tacky mats is used both as edge protection and as a ramp. The movable floor plate is designed for mobile applications of the foil tacky mats.



### The DASTMAT-system



## PERMANENT ADHESIVE TACKY MATS

### Application areas

- ▶ in front of the personnel transfer areas
- ▶ in the dressing area
- ▶ in front of and/or behind the "Sit-Over"

### Properties

- ▶ permanently adhesive and washable tacky mat
- ▶ traps larger particles and prevents heavy loads of contamination entering the clean zone/lock
- ▶ the "pre-cleaning effect" of the DASTMAT-100 can reduce the usage of the secondary laid foil tacky mat – and with it the running costs
- ▶ the saturated DASTMAT-100 can simply be cleaned with warm water  
As soon as the mat is dry again it regains its adhesive properties  
No solvent based cleaning agents should be used as these will destroy the adhesive properties of the mat
- ▶ because of the weight of the mat, the consistency of the material and the low height the mat can simply be laid as a non-slip mat – without frame – on the flat and cleaned floor. It should be remembered though, that the floor and the mat must be completely dry in order to prevent the danger of skidding

Permanent adhesive tacky mats are available in two qualities:

### DASTMAT-100, high value mats

	Dimensions	Colour	Art.-No.
Standard	approx. 1200 x 600 x 2.3 mm	■	5020
Rolled goods <sup>1</sup>	width approx. 1200 mm	■	5023
■ blue			

simple mats for an economical price

	Dimensions	Colour	Art.-No.
Standard	approx. 1200 x 600 x 2.3 mm	■	5027
Standard <sup>2</sup>	approx. 1000 x 1000 x 3 mm	■	5028
■ blue			





## PEEL OFF TACKY MATS

### Application areas

- ▶ directly before or behind the inner transfer door
- ▶ during maintenance

### DASTMAT-30

#### Properties

- ▶ 30 layers of peel off tacky mat (30 single layers self-adhesive PE foil)
- ▶ clearly higher adhesion than DASTMAT-100 to trap smallest particles
- ▶ self-adhesive underneath for good grip on the floor
- ▶ when the top layer of the tacky mat is saturated it is torn off to reveal the next adhesive layer beneath
- ▶ there is a reverse index numbering on the single layers to show clearly time the remaining number of sheets
- ▶ total height only 2.0 mm for 30 layers on average
- ▶ Microbiocide treated mats are available on request (compare chapter 12.5)

### DASTMAT-60

#### Properties

- ▶ 60 layers of peel off tacky mat (60 single layers self-adhesive PE foil)
- ▶ total height only 2.3 mm for 60 layers on average
- The financial advantages are as follows:
  - reduction of storage costs.
  - reduction of ordering frequency
  - because of the double quantity of foils the timely work cost of changing mats is reduced
- ▶ the mat is available with a microbiocide on request (compare chapter 12.5)
- ▶ as details as DASTMAT-30

Article	Dimensions	Colour	PU	Art.-No.
DASTMAT-30	1140 x 660 x 2 mm	☐ ■	4 mats /case	5030*
DASTMAT-30	1140 x 660 x 2 mm	☐ ■	8 mats /case	50311
DASTMAT-30	1140 x 460 x 2 mm	☐	4 mats /case	5040*
DASTMAT-30	1140 x 460 x 2 mm	☐	8 mats /case	50411
DASTMAT-60	1140 x 660 x 2.3 mm	☐	4 mats /case	5060*
DASTMAT-60	1140 x 660 x 2.3 mm	☐	4 mats /case	5070*

☐ transparent ■ blue

\* mat equipped with microbiocide

Additional colours and sizes are available on request.



## FRAMES FOR TACKY MATS

Those frames are used both as edge protection and a ramp. Often they are also chosen for decorative reasons.  
As with the foil mats, the frames can also be tightly stuck down to the floor.  
The frames are equipped with a special non slip cover allowing a flexible use.

Dimensions	Material	PU	Art.-No.
1140 x 660 mm	aluminium	1 piece per case	5039
1140 x 460 mm	aluminium	1 piece per case	5049

## FLOOR PLATES FOR TACKY MATS

Sometimes the peel-off mats have to be removed from the floor before all layers have been used. For these occasions we offer "movable" floor plates. The foil mats are not adhered anymore directly onto the floor, but on the upper side of these special floor plates.

This frame is equipped with a special new slip cover preventing the mat from slipping.

If, for example, the floor has to be cleaned daily, the floor plate is simply removed together with the mat.

After having cleaned the floor – and after ensuring that the floor is completely dry – the floor plate including the foil mat can be reinstalled on the chosen place.

Dimensions	Material	PU	Art.-No.
1140 x 660 mm	plastic	1 piece per case	5058
1140 x 460 mm	plastic	1 piece per case	5068



## FOIL MATS WITH MICROBIOCIDE

### Additional information for microbiological controlled areas

When walking or pushing a trolley over tacky mats there are not only dust particles sticking to the mat, but also bacteria and fungi. Therefore a biocide has been added to the adhesive foil of our tacky mats, preventing growth of known bacteria and fungi.

Below is a list of organisms against which the micro biocide is effective. This information has been provided by the manufacturer for which we cannot take any responsibility. Mats equipped with micro biocide see chapter 12.3.

#### BACTERIA (GRAM-NEGATIVE)

Achromobacter parvulus  
Alcaligenes faecalis  
Azotobacter vinelandii  
Enterobacter aerogenes  
Escherichia coli  
Flavobacterium suaveolens  
Nitrobacter agilis  
Proteus vulgaris  
Pseudomonas aeruginosa  
Pseudomonas cepacia  
Pseudomonas fluorescens  
Pseudomonas oleoverans  
Salmonella typhosa  
Shigella sonnei

#### BACTERIA (GRAM-POSITIVE)

Bacillus cereus var. mycoides  
Bacillus subtilis  
Brevibacterium ammoniagenes  
Cellulomonas sp.  
Sarcina lutea  
Staphylococcus aureus  
Staphylococcus epidermidis  
Streptococcus pyogenes  
Streptomyces albus

#### FUNGI

Aspergillus foetidus  
Aspergillus niger  
Aspergillus oryzae  
Aureobasidium pullulans  
Candida albicans (yeast plant)  
Chaetomium globosum  
Cladosporium resinae  
Gliocladium fimbriatum  
Lentinus lepideus  
Lenzites trabea  
Mucor rouxii  
Penicillium funiculosum  
Penicillium variabile (glaucum)  
Phoma herbarum (pigmentivora)  
Rhizopus stolonifer  
Rhototorula rubra (yeast plant)  
Saccharomyces cerevisiae (yeast plant)  
Trichophyton mentagrophytes (interdigitale)



## IMPORTANT INFORMATION ABOUT CHAIRS AND STOOLS

### General Information

There is no doubt that our cleanroom chairs are comfortable, but they are also distinguished by other features such as abrasion resistance and dissipation of electrostatic charge.

- ▶ Dissipation is achieved by a conductive net material underneath the abrasion resistant cover which is connected with the metal parts (back rod and seat girder) by corrosion-resistant bands.
- ▶ There is a metal connection from the pillar of the chair to the foot base so that the charge can be conducted to the floor through the conductive castors.
- ▶ Resistance to EPA earth or to an earthing point  $R_g < 1 \times 10^9 \text{ Ohm}$ .

**We are pleased to advise you in detail.**

On request we can also offer alternative products such as for example Bimos chairs.

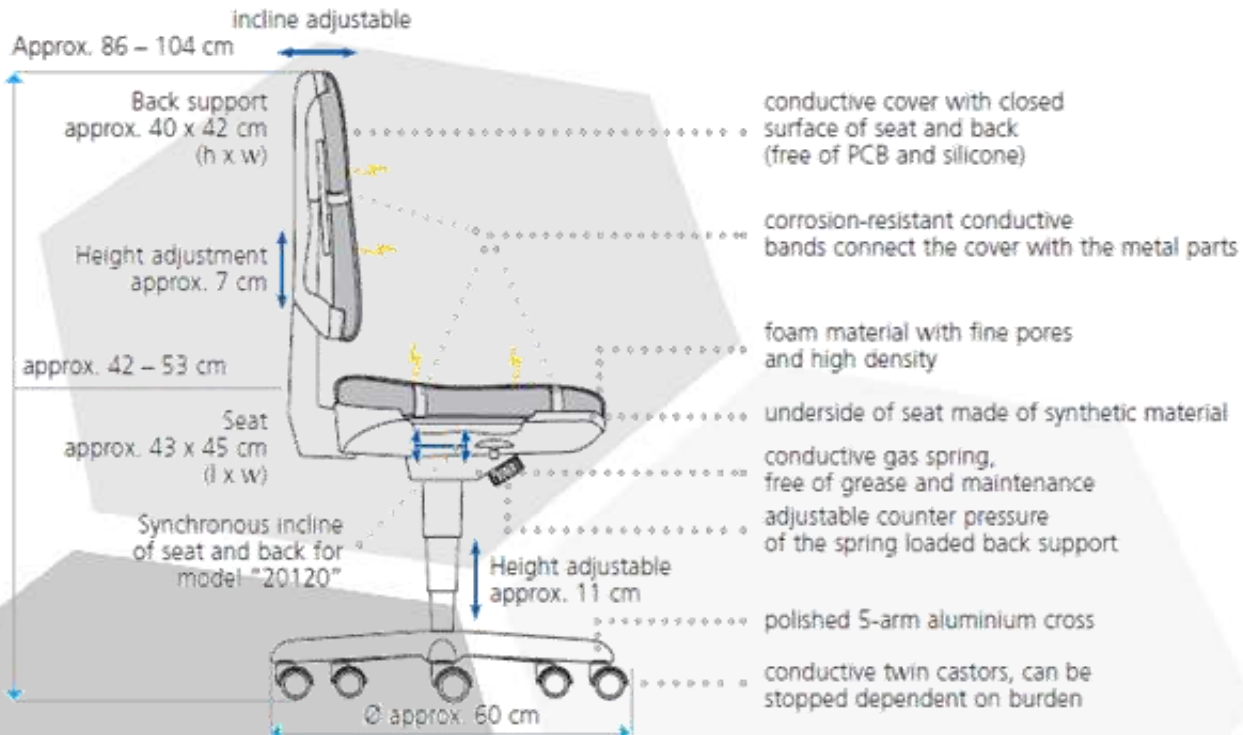


## CLEANROOM CHAIRS

- Upholstery** ▶ abrasion resistant artificial leather cover with a conductive net material underneath, without softener and therefore no gas emission
- Middle pillar** ▶ grease free head triggered gas spring for height adjustment  
▶ seat height adjustment from 420 to 530 mm, 460 to 650 mm and 590 to 840 mm (these models are only available from a height adjustment of 590 mm with ascending ring and glider)
- Back** ▶ adjustable incline of the back supported by gas lift, continuously lockable and adjustable to permanent contact  
▶ additionally the back support is height adjustable
- Seat** ▶ for model "20120" there is a synchronous inclination of seat and back support  
▶ seat for model "20110" is immovable
- Foot base** ▶ polished 5-arm aluminium foot cross
- Castors** ▶ conductive synthetic casters with a contact resistance of  $10^6$  Ohm
- Options** ▶ available on request: armrest, gliders instead of castors, ascending ring  
▶ models made from stainless steel for aseptic area

Incline of seat	Height adjustment	Colour	Art.-No.
Immovable	420 – 530 mm	anthracite	20110
Immovable	460 – 650 mm	anthracite	20110-650
Immovable	590 – 840 mm	anthracite	20110-840
Adjustable	420 – 530 mm	anthracite	20120
Adjustable	590 – 840 mm	anthracite	20120-840

table of cleanroom classes  
see chapter 14.10



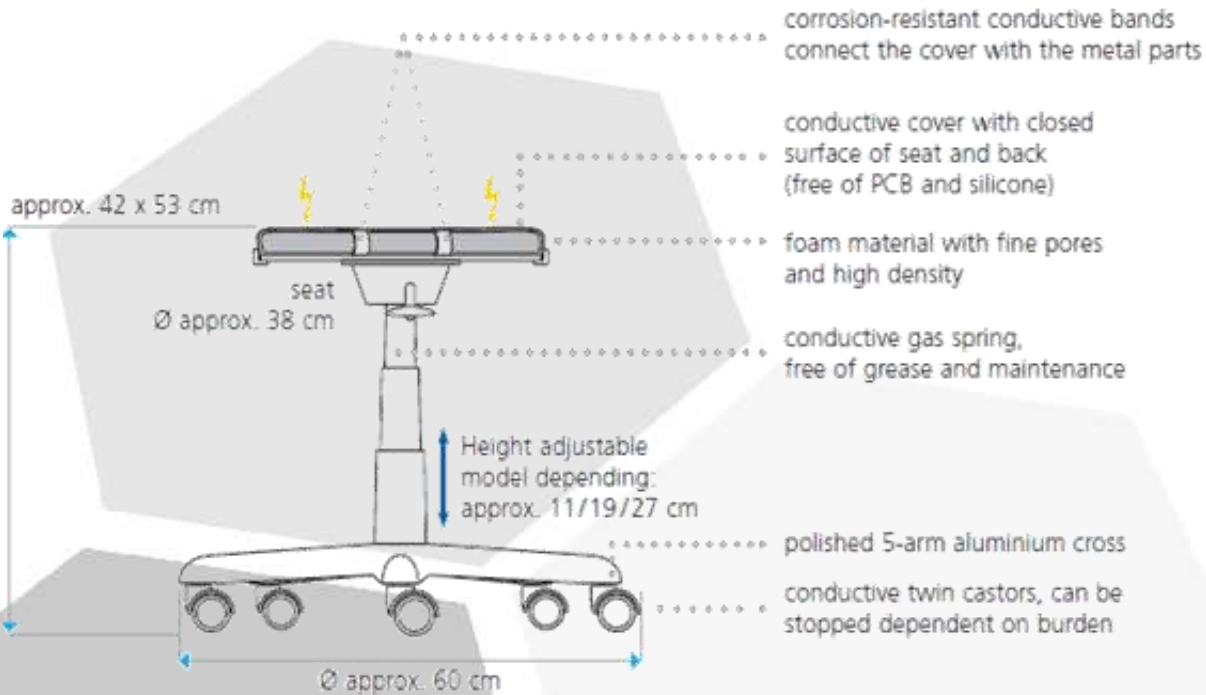
## CLEANROOM STOOL

- Upholstery** ▶ abrasion resistant artificial leather cover with conductive net material underneath, without softener and therefore no gas emission
- Middle pillar** ▶ grease free head triggered gas spring for height adjustment  
▶ seat height adjustment from 420 to 530 mm, 460 to 650 mm and 590 to 840 mm  
(these models are only available from a height adjustment of 590 mm with ascending ring and glider)
- Foot base** ▶ polished 5-arm aluminium foot cross
- Castors** ▶ conductive synthetic castors with a contact resistance of  $10^6$  Ohm
- Options** ▶ available on request: gliders instead of castors, ascending ring

Alternative made from stainless steel.



Height adjustment	Colour	Art.-No.
420 – 530 mm	anthracite	20100
460 – 650 mm	anthracite	20100-650
590 – 840 mm	anthracite	20100-840
480 – 560 mm	stainless steel	20105





## IMPORTANT INFORMATION ABOUT WASTE MANAGEMENT

### General Information

Our disposable systems are a practical and economical solution for the removal of disposable products (fleece caps, wipes, gloves, etc.) and contaminated items (e.g. garment, etc.) in the cleanroom areas.

The Longopac system is available in two sizes. Available as moveable floor unit or wall mounted – optionally with lid. The Longopac system can be assembled up to 5 or more container systems.



### Advantages:

#### Better economy

- ▶ The size of the bags are exactly adjusted to the accumulated refuse material.

#### Practical in use

- ▶ Every magazine consists of a 40 – 50 or respectively 80 – 100 m long continuous tubing, which prevents the search and assembling of new bags after every change. The tube is easily closed with the attached cable clips. The magazines can be re-ordered separately.

#### Simply more environmentally friendly

- ▶ The hose is made from pure polyethylene. Antistatic versions are also available on request.

#### Ideal for waste separation

- ▶ The hose magazines are also available in colour (black, blue, on request green and yellow).

## THE LONGOPAC SYSTEM

- ▶ the continuous tubing is freely suspended and easily accessible
- ▶ the system is available in different versions
- ▶ all versions are made from rust-free steel and flexible plastic
- ▶ the new Longopac-kit enables the combination of double, triple, etc. systems according to your requirements. Advantage: easily rebuilt.
- ▶ optionally for the models type 56 a lid can also be delivered
- ▶ the floor stands models are equipped with plastic castors

table of cleanroom classes  
see chapter 14.10



1 floor stand with lid  
(Art.-No. 27051)  
2 floor stand without lid  
(Art.-No. 27050)

3 wall mounted without lid  
(Art.-No. 27080)  
4 floor stand, double with lid  
(Art.-No. 27053)

Design	Dimensions (H x W x D)	Opening	Tube Ø / length	Art.-No.
Floor stand Type 56, single	350 x 350 x 350 mm	290 mm	350 mm/40 – 50 m	27050
Floor stand Type 56, single, with lid	800 x 360 x 360 mm	300 mm	350 mm/40 – 50 m	27051
Wall mounted Type 56	360 x 400 mm	300 mm	350 mm/40 – 50 m	27060
Wall mounted Type 56, with lid	360 x 400 mm	300 mm	350 mm/40 – 50 m	27061
Floor stand Type 90	1055 x 570 x 570 mm	420 mm	570 mm/90 – 100 m*	27070
Wall mounted Type 90	580 x 610 mm	500 mm	570 mm/90 – 100 m*	27080
Floor stand Type 90, double	980 x 1160 x 580 mm	500 mm	570 mm/90 – 100 m*	27072
Coupling element Longopac				27111

\*depending on material thickness

Magazine for	Colour	Material	Foil thickness	Tube Ø / length	Art.-No.
LONGOPAC Type 56 (standard)	☐ ☐ ☐	polyethylene	17 µm	350 mm/50m	27101
LONGOPAC Type 56 (strong)	☐	polyethylene	27 µm	350 mm/50m	27100
LONGOPAC Type 90 (standard)	☐	polyethylene	27 µm	570 mm/100m	27160
LONGOPAC Type 90 (strong)	☐	polyethylene	35 µm	570 mm/80m	27170
LONGOPAC Type 56 (standard)	☐	polyethylene	20 µm	350 mm/50m	27102
☐ transparent	☐ blue	☐ black	☐ pink		

## SHELVES SYSTEMS, TROLLEYS AND WARDROBES

The mounting of the shelf systems and wardrobes are quick and easy to install due to the established clamping arrangement. This tested system has been designed to create a multitude of special storage possibilities. The system is selectively available from stainless steel or chromed steel. The shelf systems are available either with foot plates or with castors.

- ▶ Corner posts in different lengths
- ▶ Wire shelf in different depths and widths

### Accessories

- ▶ Fastening for shelf extension
- ▶ Shelf edging in different heights
- ▶ Shelf separators
- ▶ Label holders
- ▶ Cloth rail and cloth hangers
- ▶ Aluminium-clamping cone
- ▶ Conductive ribbons

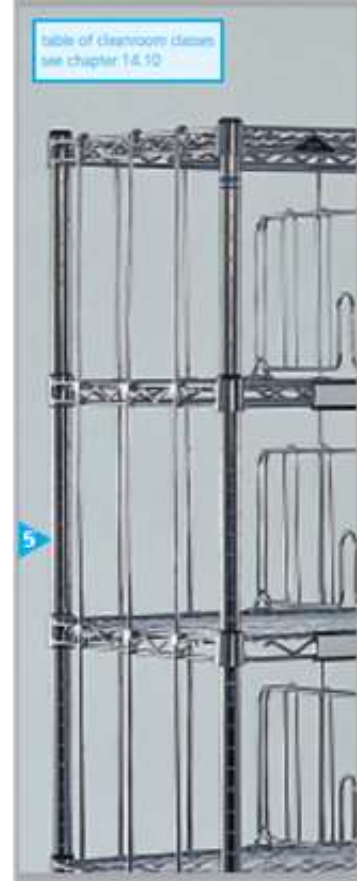
### Shelf trolley

Selectively made from stainless steel or chromed steel. The standard versions will be delivered with 2 trolley hangers and 2 or 3 grill floors.

- ▶ 4 castors, 2 with brakes
- ▶ Handles in 3 different widths
- ▶ Grid shelf in 3 different sizes

### Accessories

- ▶ Shelf edging in different heights
- ▶ Shelf separators
- ▶ Label holders
- ▶ Aluminium-clamping cone
- ▶ Conductive ribbons



- 1 bottom shelf
- 2 shelf system with cloth hanger
- 3 wire shelves
- 4 posts
- 5 shelf system with shelf separator
- 6 shelf trolley



## SIT-OVERS AND TABLES

### Sit-Overs

Version made from 1.4301 stainless steel, surface 240 grain sanded. High graded, stable version, completely welded, including two continuous shoe racks. Seat area selectively perforated or non perforated. Available in different dimensions and materials.



### Tables

Version made from 1.4301 stainless steel, surface 240 grain sanded. Stable due to three sided bracing. Seamlessly welded, cleanroom appropriate manufacturing. Table plate selectively perforated or non perforated. Available in different dimensions and materials.



- 1/2 Sit-Over with 2 shelves
- 3 seat area perforated
- 4 table non perforated
- 5 table perforated

## IMPORTANT INFORMATION ABOUT DISPENSERS

### General Information

Our dispensers are made of clear 4 – 5 mm thick acrylic glass (also available in stainless steel) and are specially designed for cleanroom compatible storage and fast dispensing of finger cots, gloves, fleece caps, face masks, overshoes, wipes, etc.

### Installation / Positioning

- ▶ wall mounted, for which two mounting holes are provided
- ▶ standing next to the workplace or shelf respectively with small rubber feet to prevent shifting
- ▶ several dispensers can be arranged in a line to form a complete dispenser station, e.g. for different sizes

### Development / Workmanship

- ▶ all corners are easily accessible and rounded, there are no unnecessary depressions where large numbers of particles could accumulate
- ▶ all cut edges are polished and fractured
- ▶ in order not to make the cleaning more difficult due to multiple edged forms of attached hinges, there are round, easy to clean plastic parts forming the pivot point of the flaps
- ▶ wide opening lids and removable bottoms ensure that the dispensers can easily be cleaned in- and outside

### Cleaning

- ▶ to avoid damage our acrylic dispensers should only be cleaned with appropriate products!  
We are pleased to advise you accordingly!

The dimensions for the acrylic dispensers introduced in the following chapters are adapted to standard products and on average consumption.

**Customized products with special dimensions are available on request.**

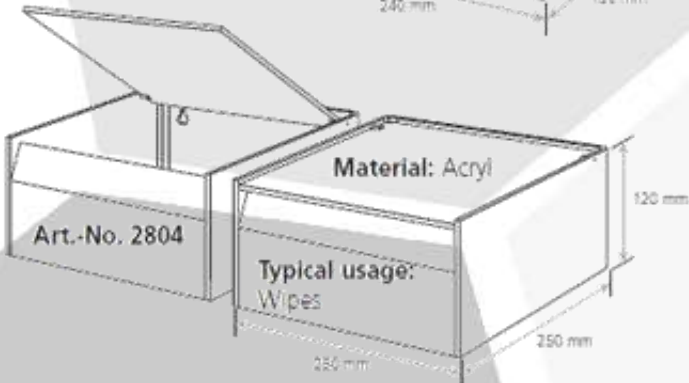
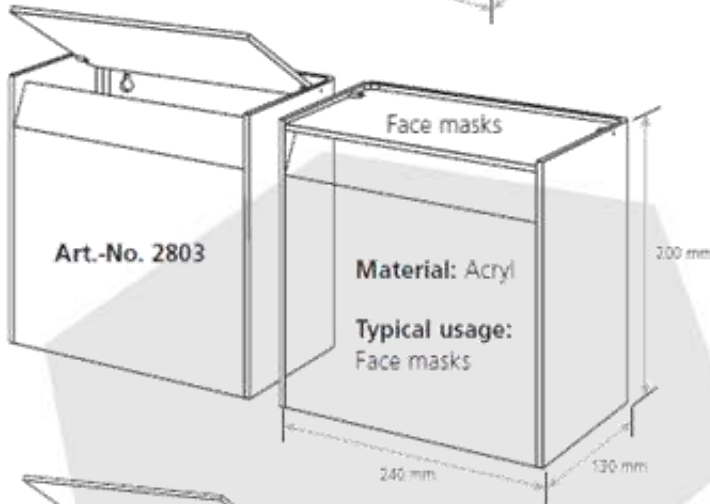
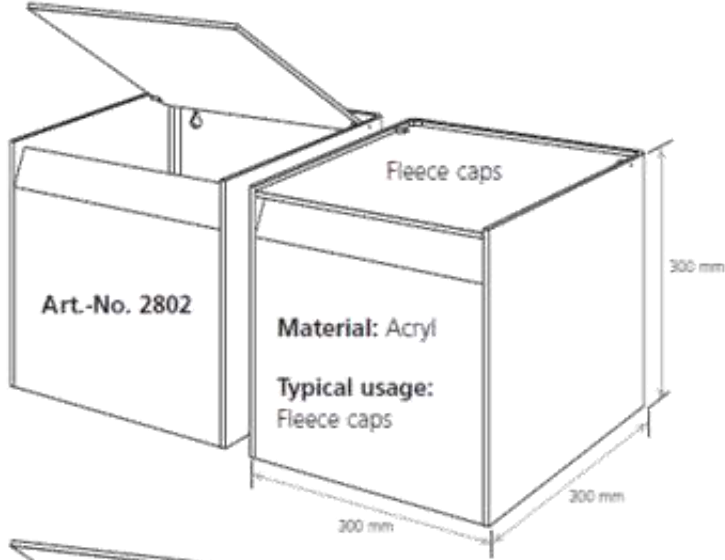


- 1 removable bottom part
- 2 cleaning of dispensers
- 3 drill holes for mounting
- 4 filled dispenser



## DISPENSERS FOR FLEECE CAPS, FACE MASKS AND WIPES

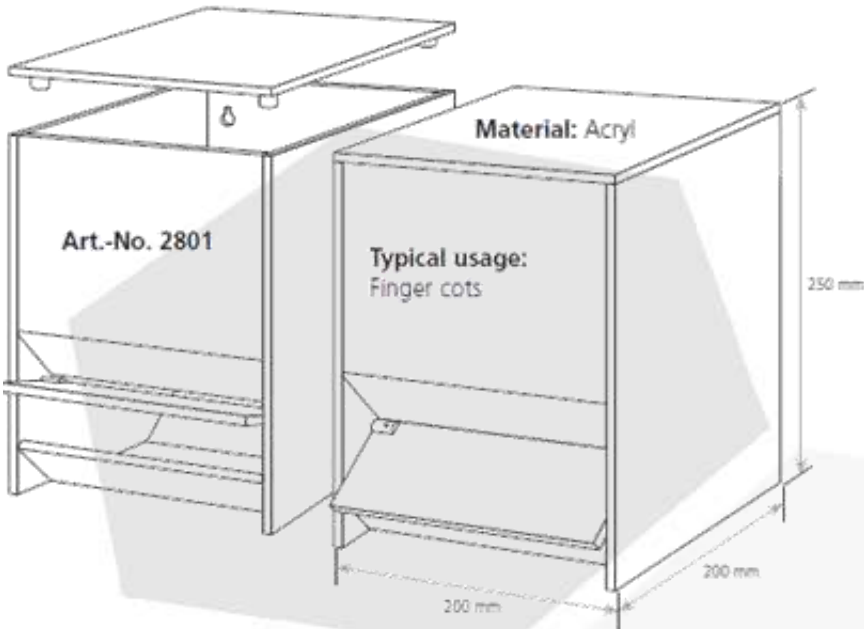
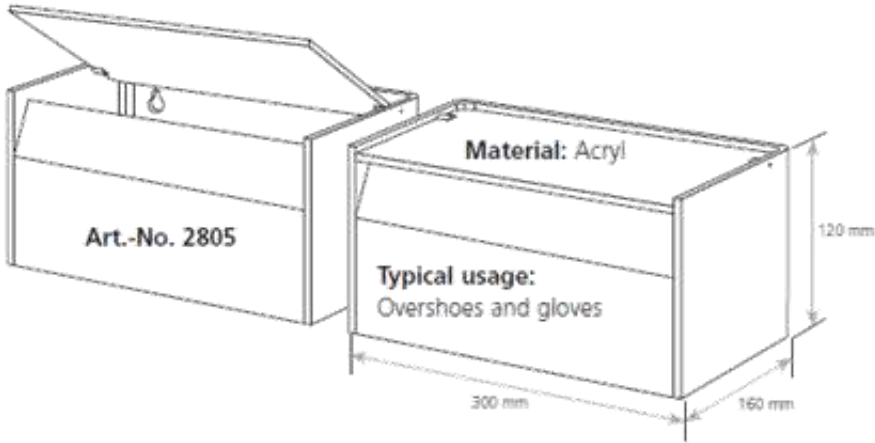
- ▶ Dispenser for cleanroom compatible storage and easy dispensing of different consumables.
- ▶ The bottom of the box can be removed without difficulty for easy cleaning.





## DISPENSERS FOR OVERSHOES, GLOVES AND FINGER COTS

- ▶ Dispenser for cleanroom compatible storage and easy dispensing of different consumables.
- ▶ The bottom of the box can be removed without difficulty for easy cleaning.



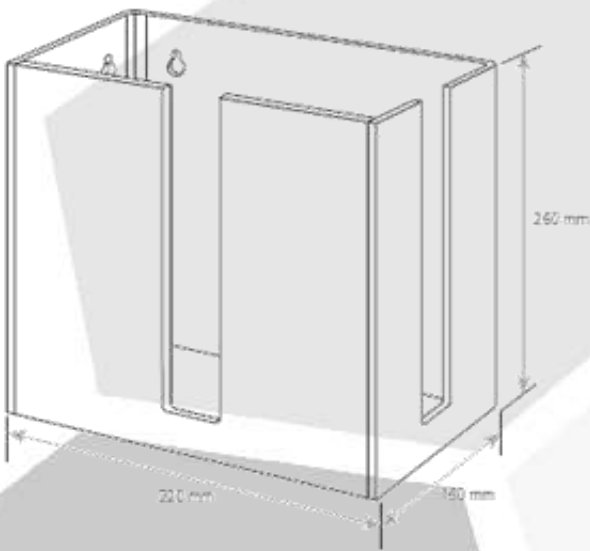
- ▶ Due to the complex construction of the acryl box 2801 (a "slide" enables the supply of finger cots) the bottom part cannot be removed for cleaning.



## DISPENSERS FOR STERILE DISPOSABLE GLOVES

- ▶ Dispenser for cleanroom compatible storage and easy dispensing of sterile disposable Latex or Nitril gloves.
- ▶ In order to guarantee easy dispensing for gloves packed in plastic foils there is no lid on this dispenser. There is a gap in the front and at the side of the dispenser that ensures removal of only one pair at a time. The dispenser can be positioned lengthwise or transversely.
- ▶ The bottom of the box can be removed without difficulty for easy cleaning.

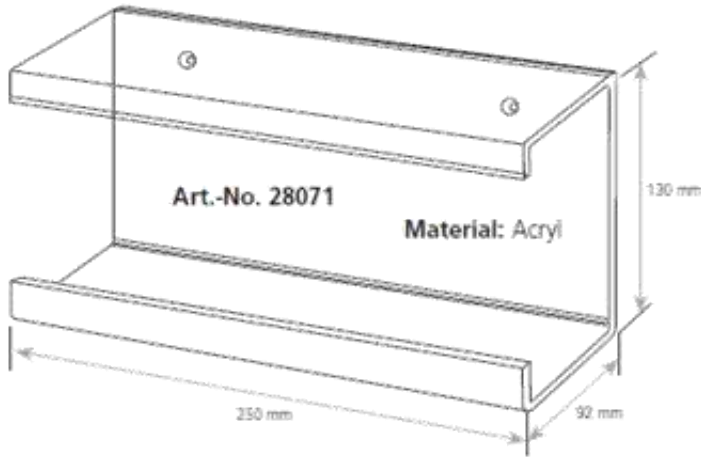
Dimensions (w x h x d)	Material	Art.-No.
320 x 260 x 160 mm	acryl	2806
320 x 260 x 160 mm	stainless steel	28111



## DISPENSERS FOR DISPOSABLE GLOVES

- ▶ Dispenser for cleanroom compatible storage and easy dispensing of box packed disposable Latex or Nitril gloves from Kimberly & Clark.
- ▶ This dispenser is easily wall mounted with two screws.

For box packed gloves please refer to chapter 7.6.



## 4-PANEL-DISPENSER

- ▶ Dispenser for cleanroom compatible storage of several products next to each other, for example disposable gloves – e.g. several sizes (S, M, L, XL) or different consumables, such as overshoes, face mask and fleece caps, etc.)
- ▶ Dimensions 665 x 300 x 300 mm (w x h x d)
- ▶ Easily wall mounted
- ▶ Material: Acrylic
- ▶ Art.-No. 2809





## ADHESIVE TAPES FOR CLEANROOMS

In the field of adhesive tapes for cleanrooms we are working together with various international manufacturers. These fulfil the below mentioned criteria and requirement profiles. With well over 100 cleanroom appropriate adhesive tapes a wide assortment is available which covers nearly every application.

We are pleased to advise you and send you detailed information on request.

### Range of application

- ▶ Renovation or new constructions
- ▶ During running production processes

### General requirement profile for cleanroom adhesive tapes

- ▶ Particle free
- ▶ No outgassing
- ▶ Remnant free removal of the tapes
- ▶ High resilience

### Special requirements

- ▶ Autoclavable
- ▶ ESD-suitable
- ▶ High elasticity
- ▶ High temperature consistent
- ▶ Special warning print
- ▶ Double-sided adhesive area
- ▶ Indicator function for autoclaving
- ▶ Anti-slip tapes
- ▶ Available in different lengths, widths and colours
- ▶ Special designs on request

## STICKY TAPE TO SECURE DISPOSABLE GLOVES

It is quite common that during extreme arm movements the disposable gloves slip from the knitted cuff the sleeves of cleanroom garments and the skin of the operators becomes uncovered. For these requirements (= avoiding slipping) we offer a special cleanroom appropriate adhesive tape, which will fix the glove to the sleeves of the garments. Pull off perforation simplify the application of this adhesive tape. After use according to manufacturer declaration it can be remnant free removed. This one is also available in a sterile version.



# Quick overview wipers

## Quick Overview of Sterile Dry Wipers

STERILE DRY WIPERS	MATERIAL	RECOMMENDED CLASS	EDGE	APPLICATION
Gamma Wipe SuperSorb®	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
Gamma Wipe® 300	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
Gamma Wipe® 120	Knitted Polyester	ISO Class 4-5	Knife-Cut	Critical
Gamma Wipe® 67	Nonwoven Polyester/Cellulose	ISO Class 5-8	Knife-Cut	Controlled

## Quick Overview of Sterile Pre-Wetted Wipers

STERILE PRE-WETTED WIPERS	MATERIAL	RECOMMENDED CLASS	EDGE	APPLICATION
Sterile Satpax® HA	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
Sterile Satpax® 1200	Knitted Polyester	ISO Class 4-5	Knife-Cut	Critical
Sterile Satpax® 1000	Nonwoven Polyester/Cellulose	ISO Class 5-8	Knife-Cut	Controlled
Sterile Satpax® 670	Nonwoven Polyester/Cellulose	ISO Class 5-8	Knife-Cut	Controlled

## Quick Overview of Pre-Wetted Wipers

PRE-WETTED WIPERS	MATERIAL	RECOMMENDED CLASS	EDGE	APPLICATION
Satpax® 3000	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
Satpax® HA-R	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
Satpax® 120-R	Knitted Polyester	ISO Class 4-5	Knife-Cut	Critical
Satpax® 1000	Nonwoven Polyester/Cellulose	ISO Class 5-8	Knife-Cut	Controlled
Satpax® 1000 – Canister	Nonwoven Polyester/Cellulose	ISO Class 5-8	Pre-perforated	Controlled
Satpax® 670	Nonwoven Polyester/Cellulose	ISO Class 5-8	Knife-Cut	Controlled
Satpax® 550	Polypropylene	ISO Class 5-8	Knife-Cut	Controlled

POLYURETHANE FOAM	MATERIAL	RECOMMENDED CLASS	EDGE	APPLICATION
PureSorb™ Foam Wiper	Polyurethane Foam, Open-Cell	ISO Class 3-5	Laser-Cut	Critical

MICROFIBER WIPERS	MATERIAL	RECOMMENDED CLASS	EDGE	APPLICATION
MicroPolx® 2750	Polyester/Nylon Microdenier	ISO Class 4-5	Sealed Edge	Critical
MicroPolx® 4000-HP	Polyester/Nylon Microdenier	ISO Class 4-5	Sealed Edge	Critical

WOVEN WIPER	MATERIAL	RECOMMENDED CLASS	EDGE	APPLICATION
Twilx® 1622	Woven Cotton	ISO Class 6-8	Knife-Cut	Controlled

NON-WOVEN WIPERS	MATERIAL	RECOMMENDED CLASS	EDGE	APPLICATION
BlueSorb® 750	Nonwoven Polyester/Cellulose	ISO Class 5-8	Knife-Cut	Controlled
Durx® 770	Nonwoven Polyester/Cellulose	ISO Class 5-8	Knife-Cut	Controlled
Durx® 670	Nonwoven Polyester/Cellulose	ISO Class 5-8	Knife-Cut	Controlled
Durx® 670-Roll	Nonwoven Polyester/Cellulose	ISO Class 5-8	Pre-perforated	Controlled
Exsorbx® 400	Nonwoven Polyester	ISO Class 5-8	Knife-Cut	Controlled
Pro-Wipe® 750	Polypropylene/Cellulose	ISO Class 5-8	Knife-Cut	Controlled
Pro-Wipe® 880	Polypropylene	ISO Class 5-8	Knife-Cut	Controlled
ValuClean® Plus	Polyester/Rayon	ISO Class 5-8	Knife-Cut	Controlled
Lenx® 90	Rayon/Hemp Blend	ISO Class 6-8	Knife-Cut	Controlled

KNITTED WIPERS	MATERIAL	RECOMMENDED CLASS	EDGE	APPLICATION
MicroSeal SuperSorb®	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
Ultra-Seal® 3000	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
MicroSeal® 3000	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
Choice® SuperSorb	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
MicroSeal® 1200	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
CapSure®-VP	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
MicroSeal®-VP	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
ValuSeal-HA®	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
ValuSeal®-LP	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
ValuSeal® 1500	Knitted Polyester	ISO Class 3-5	Laser-Cut	Critical
ValuSeal® IonX®	Knitted Polyester	ISO Class 3-5	Laser-Cut	Critical
Super Polx ® SWSE	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
Super Polx ® LWSE	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
Super Polx ® 1200	Knitted Polyester	ISO Class 4-5	Knife-Cut	Critical
Super Polx ® 1200A	Knitted Polyester	ISO Class 4-5	Knife-Cut	Critical
Super Polx® SW	Knitted Polyester	ISO Class 4-5	Knife-Cut	Critical
Polx® 1200	Knitted Polyester	ISO Class 5-8	Knife-Cut	Controlled



## 1.1 Sterile Wipers



### STERILE WIPERS

Berkshire's Gamma Wipers are designed for aseptic applications. Validated sterile, with full lot tracking and certificates of sterility available online, these wipers are manufactured to the highest standards and in accordance with our ISO 9001 certified system. They are very low in particles and fibers and provide high levels of absorbency.

### KEY BENEFITS

- › Validated sterile according to ANSI/AAMI/ISO procedures
- › Gamma irradiated to a 10<sup>-6</sup> Sterility Assurance Level
- › Certificate of Sterility available online, by lot number at [www.berkshire.com](http://www.berkshire.com)
- › \* Details: Expiration Date, Radiation Dosage, Lot Information, Meets cGMP requirements for traceability

### Quick Overview of Sterile Dry Wipers

WIPER	MATERIAL	RECOMMENDED CLASS	EDGE	APPLICATION
Gamma Wipe SuperSorb®	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
Gamma Wipe® 300	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
Gamma Wipe® 120	Knitted Polyester	ISO Class 4-5	Knife-Cut	Critical
Gamma Wipe® 67	Nonwoven Polyester/ Cellulose	ISO Class 5-8	Knife-Cut	Controlled

### Quick Overview of Sterile Pre-Wetted Wipers

WIPER	MATERIAL	RECOMMENDED CLASS	EDGE	APPLICATION
Sterile Satpax® HA	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
Sterile Satpax® 1200	Knitted Polyester	ISO Class 4-5	Knife-Cut	Critical
Sterile Satpax® 1000	Nonwoven Polyester/ Cellulose	ISO Class 5-8	Knife-Cut	Controlled
Sterile Satpax® 670	Nonwoven Polyester/ Cellulose	ISO Class 5-8	Knife-Cut	Controlled

## Sterile Dry Wipers

ISO Class 3-8 / EU Grade A-D

### BCR® GAMMA WIPERS

Validated sterile wipers for compliance with sterile operating procedures. Large size sheets for higher absorbency. Small packs for convenience and economy.



### Gamma Wipe SuperSorb®

- > Sterile MicroSeal SuperSorb®
- > Laundered and packed in Berkshire's ISO Class 4 cleanroom
- > 100% continuous filament polyester knit
- > Two-ply pinsonic construction with unique knit structure and pattern
- > Fine ultrasonically sealed edges for reduced fiber contamination
- > Ideal for wet applications and spill control
- > Very high absorbency

### Gamma Wipe® 300

- > Sterile UltraSeal® 3000
- > Laundered and packed in Berkshire's ISO Class 4 cleanroom
- > 100% continuous filament polyester knit
- > Two-ply pinsonic tubular construction
- > Patented wide sealed edge process for reduced fiber contamination
- > High surface tear strength
- > Very robust



### Gamma Wipe® 120

- > Sterile Super Polx® 1200
- > Laundered and packed in Berkshire's ISO Class 4 cleanroom
- > 100% continuous filament polyester knit
- > Knife cut edges
- > Single layer construction
- > Available in two sizes: 9x9" and 12x12"
- > Economical wiper for critical applications

### Gamma Wipe® 67

- > Sterile Durx® 670
- > 55% cellulose / 45% polyester hydroentangled nonwoven
- > No binders or other chemical additives
- > Available in two sizes: 9x9" and 12x12"
- > High absorbency
- > Economical
- > General purpose

## Sterile Pre-Wetted Wipers

ISO Class 3-8 / EU Grade A-D

### BCR® STERILE SATPAX® WIPERS

Validated sterile pre-wetted wipers, packed in re-sealable solvent resistant pouches. Ideal for cleaning critical sterile processing or aseptic environments. Safety Data Sheets (SDS) available online.



### Sterile Satpax® HA

- › Sterile pre-wetted ValuSeal-HA®
- › Laundered and packed in Berkshire's ISO Class 4 cleanroom
- › 100% continuous filament polyester knit
- › Ultrasonically sealed on 4 sides
- › Strong, tear and abrasion resistant
- › High absorbency
- › Low endotoxin levels

### Sterile Satpax® 1200

- › Sterile pre-wetted Super Polix® 1200
- › Laundered and packed in Berkshire's ISO Class 4 cleanroom
- › 100% continuous filament polyester knit
- › Knife cut edges
- › Single layer construction
- › Economical wiper for critical applications



### Sterile Satpax® 670

- › Sterile pre-wetted Durx® 670
- › 55% cellulose / 45% polyester hydroentangled nonwoven
- › No secondary binders
- › High absorbency
- › Economical
- › General purpose

### Sterile Satpax® 1000

- › Sterile pre-wetted Durx® 670
- › 55% cellulose / 45% polyester hydroentangled nonwoven
- › No secondary binders
- › High absorbency
- › Economical
- › General purpose



## 1.2 Dry Wipers

### Dry Wipers

ISO Class 3-5 / EU Grade B-D / Class 1-100 / Knitted Polyester - Sealed Edges

#### KEY BENEFITS:

- › Wipers are laundered and packed in Berkshire's ISO Class 4 cleanroom
- › Sealed edges - wide heat seals, fine ultrasonic or laser sealed edges
- › Double thickness for high absorbency
- › Tear resistant for tough cleaning
- › Sterilisable by Autoclave, Gamma or Beta
- › Chemically compatible with IPA, Acetone and other solvents
- › Lot tracing on each pack
- › Vacuum and double packed
- › Stacked or Bulk packaging



#### MicroSeal SuperSorb®

- › Laundered and packed in Berkshire's ISO Class 4 cleanroom
- › 100% continuous filament polyester knit
- › Two-ply pinsonic construction with unique knit structure and pattern
- › Fine ultrasonically sealed edges for reduced fiber contamination
- › Ideal for wet applications and spill control
- › Very high absorbency



#### Choice® SuperSorb

- › Laundered and packed in an ISO Class 4 cleanroom
- › 100% continuous filament polyester knit
- › Two-ply pinsonic construction with unique diamond pattern
- › Fine ultrasonically sealed edges for reduced fiber contamination
- › Ideal for wet applications and spill control
- › Very high absorbency
- › Economical alternative to the MicroSeal SuperSorb®



#### UltraSeal® 3000

- › Laundered and packed in Berkshire's ISO Class 4 cleanroom
- › 100% continuous filament polyester knit
- › Two-ply pinsonic tubular construction
- › Patented wide sealed edge process for reduced fiber contamination
- › High surface tear strength
- › Very robust



#### MicroSeal® 3000

- › Laundered and packed in Berkshire's ISO Class 4 cleanroom
- › 100% continuous filament polyester knit
- › Two-ply pinsonic tubular construction
- › Fine ultrasonically sealed on 2 edges
- › High surface tear strength
- › Very robust



### MicroSeal® 1200

- › Laundered and packed in Berkshire's ISO Class 4 cleanroom
- › 100% continuous filament polyester knit
- › Fine ultrasonically sealed on 4 edges
- › High absorbency
- › Clean, soft and pliable edges
- › Very low in particles and fibers



### MicroSeal®-VP

- › Laundered and packed in Berkshire's ISO Class 4 cleanroom
- › 100% continuous filament polyester knit
- › Fine ultrasonically sealed on 4 edges
- › Very low in particles and fibers
- › Low endotoxin levels
- › Economical alternative to the MicroSeal® 1200



### ValuSeal-HA®

- › Laundered and packed in Berkshire's ISO Class 4 cleanroom
- › 100% continuous filament polyester knit
- › Fine ultrasonically sealed on 4 edges
- › Strong, tear and abrasion resistant
- › High absorbency
- › Very low in particles and fibers



### ValuSeal®-LP

- › Laundered and packed in Berkshire's ISO Class 4 cleanroom
- › 100% continuous filament polyester knit
- › Fine ultrasonically sealed on 4 edges
- › Strong, tear and abrasion resistant
- › Good absorbency
- › Very low in particles and fibers



### ValuSeal® 1500

- > Laundered and packed in Berkshire's ISO Class 4 cleanroom
- > 100% continuous filament polyester knit
- > Laser cut on 4 edges
- > Lightweight
- > High absorbency
- > Very low in particles and fibers



### ValuSeal® IonX®

- > Laundered and packed in an ISO Class 4 cleanroom
- > 100% continuous filament polyester knit
- > Smooth knit structure
- > Laser cut on 4 edges
- > Lightweight
- > Critically low in particles, fibers, ions and extractables



### CapSure®-VP

- > Laundered and packed in Berkshire's ISO Class 4 cleanroom
- > 100% continuous filament polyester knit
- > Fine ultrasonically sealed on 4 edges
- > Patented surface treatment captures and retains particulate contamination
- > Captures 42 times more particles than competitive (untreated) wipers
- > Retains 93% of particles captured



### Super Polx® SWSE

- > Laundered and packed in an ISO Class 4 cleanroom
- > 100% continuous filament polyester knit
- > Fine ultrasonically sealed on 4 edges
- > Soft and pliable edges
- > High absorbency
- > Very economical



### Super Polx® LWSE

- > Laundered and packed in an ISO Class 4 cleanroom
- > 100% continuous filament polyester knit
- > Fine ultrasonically sealed on 4 edges
- > Lightweight
- > Good absorbency
- > Very economical



## Dry Wipers

ISO Class 4-5 / EU Grade B-D / Class 10-100 / Knitted Polyester - Knife-Cut

### KEY BENEFITS:

- > Wipers are laundered and packed in Berkshire's ISO Class 4 cleanroom
- > Tear resistant for tough cleaning
- > Sterilisable by Autoclave, Gamma or Beta
- > Chemically compatible with IPA, Acetone and other solvents
- > Lot tracing on each pack
- > Vacuum packed and double packed
- > Stacked or Bulk packaging



### Super Polx ® 1200

- > Laundered and packed in Berkshire's ISO Class 4 cleanroom
- > 100% continuous filament polyester knit
- > Very good absorbency
- > Economical wiper for critical applications

### Super Polx ® 1200A

- > Laundered and packed in an ISO Class 4 cleanroom
- > 100% continuous filament polyester knit
- > Very good absorbency
- > Economical alternative to the Super Polx ® 1200



### Super Polx® SW

- > Laundered and packed in an ISO Class 4 cleanroom
- > 100% continuous filament polyester knit
- > Good absorbency
- > Very economical

## Dry Wipers

ISO Class 5-8 / EU Grade B-D / Class 100-100,000 / Knitted Polyester - Unlaundered

### KEY BENEFITS:

- > Economic high volume cleaning and wipe-downs
- > Superior tear resistance for cleaning rough surfaces and sharp edges
- > Sterilisable by Autoclave, Gamma or Beta
- > Chemically compatible with IPA, Acetone and other solvents
- > Lot tracing on each pack
- > Vacuum packed and double packed



### Polx® 1200

- > 100% continuous filament polyester knit
- > High surface tear strength
- > Good absorbency
- > Economical

## Dry Wipers

ISO Class 3-5 / EU Grade B-D / Class 1-100 / Laundered Open-Cell Polyurethane Foam

### KEY BENEFITS:

- › Very low in particles and fibers
- › Laser cut on 4 edges
- › Soft and non-abrasive
- › Chemically compatible with IPA and other solvents
- › High sorbency capacity
- › Entraps and removes the particles



### PureSorb™ Foam Wiper

- › Polyester-based polyurethane foam wiper
- › 100 ppi open cell hydrophilic foam
- › Enhanced removal of disinfecting solutions
- › Reticulated in a non-chemical process
- › Excellent for applying cleaning solutions to large surfaces
- › Very high absorbency

## Dry Wipers

ISO Class 4-5 / EU Grade B-D / Class 10-100 / Microfiber

### KEY BENEFITS:

- › Wipers are laundered and packed in an ISO Class 4 cleanroom
- › Fine ultrasonically sealed edges for reduced fiber contamination
- › Ultrafine, wedge-shaped polyester and nylon filaments
- › Tight knitted structure
- › Smooth surface
- › Extremely soft
- › Chemically compatible with IPA, Acetone and other solvents



### MicroPolx® 4000 HP

- › Ultrafine microfiber yarn provides superior wiping efficiency
- › Wedge-shaped fiber cross section lifts, entraps and removes particles from critical surfaces
- › Cleans efficiently with less solvent usage compared to traditional wipers
- › Removes oily soils with little or no solvent required
- › Used for delicate cleaning processes
- › High absorbency

### MicroPolx® 2750

- › Ultrafine microfiber yarn provides superior wiping efficiency
- › Wedge-shaped fiber cross section lifts, entraps and removes particles from critical surfaces
- › Cleans efficiently with less solvent usage compared to traditional wipers
- › Removes oily soils with little or no solvent required
- › Designed for scratch sensitive surfaces
- › Economical

## Dry Wipers

ISO Class 5-8 / EU Grade B-D / Class 100-100,000 / Nonwoven

### KEY BENEFITS:

- > Low in particles and fibers
- > Economical
- > Very high absorbency
- > Lot tracing on each pack
- > Double packed
- > High wet strength



### BlueSorb® 750

- > Nonwoven polyester/cellulose blend
- > Blue colour indicates wetness
- > Very absorbent
- > Sterilisable by Autoclave, Gamma or Beta
- > Chemically compatible with common cleaning and disinfecting solutions



### Durx® 770

- > Nonwoven polyester/cellulose blend
- > Binder treatment to reduce particle and fiber generation
- > Absorbent
- > Sterilisable by Autoclave, Gamma or Beta
- > Chemically compatible with common cleaning and disinfecting solutions



### Durx® 670

- > Nonwoven polyester/cellulose blend
- > Recommended for general cleaning and spill control
- > No binders or other chemical additives
- > Sterilisable by Autoclave, Gamma or Beta
- > Chemically compatible with common cleaning and disinfecting solutions

### Durx® 670-Roll

- > Nonwoven polyester/cellulose blend
- > Pre-perforated sheets on plastic core
- > Economical
- > Good upgrade from industrial wipers
- > Ideal for grey areas and controlled environments



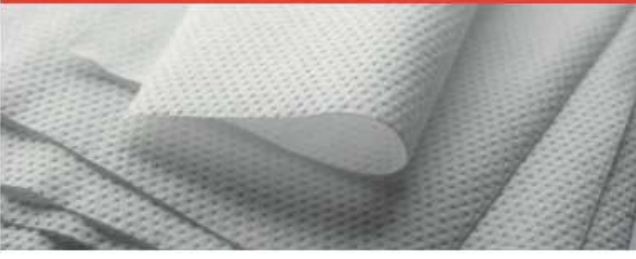
### Exsorbx® 400

- > 100% polyester, hydroentangled nonwoven
- > Low fiber and particle generation
- > Quickly absorbs water and solvents
- > Works well with IPA and other solvents
- > Prevents abrasion with its soft and pliable surface

### Pro-Wipe® 750

- > Nonwoven polypropylene/cellulose blend
- > Layer of cellulose thermally bonded between two outer layers of polypropylene
- > Low fiber and particle generation
- > Chemically compatible with strong solvents
- > Excellent for cleaning scratch sensitive surfaces





### Pro-Wipe® 880

- › 100% Nonwoven polypropylene
- › Multiple layers of polypropylene thermally bonded in a quilted construction
- › Durable and pure with a very low particle and fiber generation
- › Chemically compatible with strong solvents and acids
- › Ideal for equipment cleaning and spill pick up



### ValuClean® Plus

- › Nonwoven polyester/rayon blend
- › Recommended for general cleaning and spill control
- › No binders or other chemical additives
- › Very absorbent
- › Chemically compatible with common cleaning and disinfecting solutions

## Dry Wipers

ISO Class 6-8 / EU Grade C-D / Class 1,000-100,000 / Nonwoven



### Lensx® 90

- › Nonwoven rayon/hemp blend
- › 100% biodegradable
- › Extremely soft
- › Ideal for cleaning delicate surfaces
- › Nonabrasive

## Dry Wipers

ISO Class 6-8 / EU Grade C-D / Class 1,000-100,000 / Woven Cotton

#### KEY BENEFITS:

- › Excellent strength and durability
- › High heat resistance
- › Excellent resistance to the build-up of electrostatic discharge in 40-60% RH environments
- › Good absorbency
- › Works well with IPA and other solvents
- › Double packed



### Twillx® 1622

- › 100% woven cotton
- › Twill pattern and bias cut
- › 100% biodegradable
- › Ideal for cleaning heated surfaces
- › Nonabrasive

## 1.3 Pre-wetted Wipers



Berkshire's pre-wetted wipers are designed for both critical and controlled processes where control of flammable solvents and flammable solvent concentrations is required. A high saturation level is ideal for removing, cleaning and disinfecting residues in regulated environments. Pre-wetted with IPA and DI Water, these wipers are available in an easy, ready-to-use format. The IPA is of EU Pharmacopoeia grade. Safety Data Sheets (SDS) available online.

### KEY BENEFITS

- › Minimise VOC (volatile organic compound)
- › Consistent saturation level, same wetness every time
- › No over-spraying or wetting of surfaces
- › Re-sealable flexible pouches
- › No handling or preparation costs

### Quick Overview of Pre-Wetted Wipers

WIPER	MATERIAL	RECOMMENDED CLASS	EDGE	APPLICATION
Satepax® 3000	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
Satepax® HA-R	Knitted Polyester	ISO Class 3-5	Sealed Edge	Critical
Satepax® 120-R	Knitted Polyester	ISO Class 4-5	Knife-Cut	Critical
Satepax® 1000	Nonwoven Polyester/Cellulose	ISO Class 5-8	Knife-Cut	Controlled
Satepax® 1000 – Canister	Nonwoven Polyester/Cellulose	ISO Class 5-8	Pre-perforated	Controlled
Satepax® 670	Nonwoven Polyester/Cellulose	ISO Class 5-8	Knife-Cut	Controlled
Satepax® 550	Polypropylene	ISO Class 5-8	Knife-Cut	Controlled

## Pre-wetted Wipers

BCR® SatPax® Wipers / Critical Process / ISO Class 3-5 / EU Grade B-D / Class 1 - 100



### Satpax® 3000

- › Pre-wetted UltraSeal® 3000
- › Laundered and packaged in Berkshire's ISO Class 4 cleanroom
- › 100% continuous filament polyester knit
- › Two-ply pinsonic tubular construction
- › Patented wide sealed edge process for reduced fiber contamination
- › High surface tear strength
- › Very robust



### Satpax® HA-R

- › Pre-wetted ValuSeal-HA®
- › Laundered and packaged in Berkshire's ISO Class 4 cleanroom
- › 100% continuous filament polyester knit
- › Ultrasonically sealed on 4 sides
- › Strong, tear and abrasion resistant
- › High absorbency
- › Very low in particles and fibers



### Satpax® 120-R

- › Pre-wetted Super Polx® 1200
- › Laundered and packaged in Berkshire's ISO Class 4 cleanroom
- › 100% continuous filament polyester knit
- › Knife cut edges
- › Single layer construction
- › Economical wiper for critical applications



## Pre-wetted Wipers

BCR® SatPax® Wipers / Controlled Process / ISO Class 5-8 /  
EU Grade B-D / Class 100 - 100,000



### Satpax® 670

- › Pre-wetted Durx® 670
- › 55% cellulose / 45% polyester hydroentangled nonwoven
- › No secondary binders
- › High absorbency
- › Economical
- › General purpose

### Satpax® 1000

- › Pre-wetted Durx® 670
- › 55% cellulose / 45% polyester hydroentangled nonwoven
- › No secondary binders
- › High absorbency
- › Economical
- › General purpose



### Satpax® 1000 – Canister

- › Pre-wetted Durx® 670
- › 55% cellulose / 45% polyester hydroentangled nonwoven
- › No secondary binders
- › High absorbency
- › Economical
- › General purpose

### Satpax® 550

- › 100% meltblown polypropylene
- › Low in particles and fibers
- › No secondary binders

## BCR® Flat Mop Wipers



BCR® Flat Mop Wipers are designed to minimise and remove cleanroom contamination in a wide range of applications and are manufactured to the highest quality standards, offering consistent performance every time. Mop Wipers range from critical 100% knitted polyester to controlled process nonwoven wipers. All the wipers are measured to exactly fit the Mop Head system. Mop Wipers are disposable. More than one wiper can be attached to the mop head at a time. After mopping the area, the outer wiper can be disposed of and the remaining wipers are ready for the next mopping phase. This guarantees a fresh wiper is used for each new phase, maximising the efficiency of the cleaning.

### APPLICATIONS

- > ISO Class 3-8 / EU Grade B-D / Class 1-100,000
- > Floors, walls and ceilings
- > Wet or dry

### Quick Overview of BCR® Flat Mop Wipers

FLAT MOP WIPERS	APPLICATION	AUTOCLAVABLE	GAMMA STERILISABLE	PRE-WETTED
MicroSeal SuperSorb®	Critical	yes	yes	No
Super Polx ® 1200A	Critical	yes	yes	No
Polx® 1200A	Controlled	yes	yes	No
Durx® 670	Controlled	yes	yes	No
Satpax® 670	Controlled	No	yes	Yes

## BCR® Folding Flat Mop Covers



Two different folding flat mop covers are available to handle a variety of cleaning tasks. An absorbent 100% knitted polyester outer cover combined with a 100% rayon nonwoven inner layer as well as an irradiated polyester cellulose blend nonwoven cover. The Folding Flat Mop Covers are designed for the capture and removal of contaminants during the cleaning process on uneven as well as smooth surfaces.

### APPLICATIONS

- > ISO Class 4-8, EU Grade B-D / Class 10 - 100,000
- > Floors, walls and ceilings
- > Dry, compatible with a wide range of solvents

### Order information

PRODUCT	NUMBER	MATERIAL	SIZE	MOPS/PACK	PACKS/CASE
Flat Mop Cover 1 (Irradiated)	FMC1IR.10	Nonwoven Polyester/Cellulose outer cover - Rayon inner layer	13x40cm	20	10
Flat Mop Cover 2	FMC2.10	Knitted polyester outer cover - Rayon inner layer	13x39cm	20	10

## BCR® Flat Mop Heads



Berkshire's Flat Mop Head is light and easy to manoeuvre, even with wet wipers attached. The head is made of high quality aluminium, which is clean, light and durable. The stainless steel springs hold up to five mop wipers in place and are very easy to operate. The bottom of the mop is smooth and has no lines or grooves where bacteria or other contamination can settle. BCR® Flat Mop Heads can be autoclaved for use in sterile applications.

### APPLICATIONS

- > ISO Class 3-8 / EU Grade B-D / Class 1-100,000
- > Floors, walls and ceilings

### BCR® Flat Mop Heads & Telescopic Handle, Order information

PRODUCT	NUMBER	FIXING	MATERIAL	SIZE	PIECE/PACK	PACKS/CASE
Flat Mop Head 1	FLATMOPHEAD1AP	Plastic "eyes"*	Lightweight anodised aluminum	9x28cm	1	10
Flat Mop Head 2	FLATMOPHEAD24M	Metal Springs	Lightweight anodised aluminum	9x58cm	1	10
Flat Mop Head 3	FLATMOPHEAD3AP	Plastic "eyes"*	Lightweight anodised aluminum	9x58cm	1	10
Telescopic Handle	HANDLE.FM;TELE.180	N/A	Lightweight anodised aluminum	85-180cm	1	10

\*Eyes are not autoclavable

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## BCR® Folding Flat Mop System



Efficient cleaning of floors, walls and other large surfaces is critical to the overall cleanliness of the production environment. The BCR® Folding Flat Mop System replicates the most effective way to clean a surface. It is easy to use and efficient.

### APPLICATIONS

- > ISO Class 4-8 / EU Grade B-D / Class 10 - 100,000
- > Floors, walls and ceilings

### Order information

PRODUCT	NUMBER	FIXING	SIZE	PIECE/PACK	PACKS/CASE
Folding Flat Mop	FFM.10	Click to lock	10x40cm	1	10
Telescopic Handle	HANDLE.FM.TELE.180	N/A	85-180cm	1	10



## BCR EasyClean® 360 Isolator Cleaning Tool

The EasyClean® 360 System includes a lightweight, manoeuvrable cleaning tool and easy-to-use, laundered polyester knitted and nonwoven covers. The padded knitted cover and rounded edges of the mop head ensure the tool does not scratch or damage surfaces. The system provides efficient cleaning of isolators, biological safety cabinets, laminar flow hoods and other mini-environments that are critical to the quality and purity of compounded products.

### APPLICATIONS

- > ISO Class 3-8 / EU Grade A-C / Class 1 - 100,000
- > Isolators, biological safety cabinets, laminar flow hoods and other mini-environments

### KEY BENEFITS:

- > Durable, mirror finish, stainless steel mop head swivels 360° for easy handling
- > Head can be locked for 180° swivel when desired
- > 10cm x 18cm triangular head shape allows for improved access in tight corners
- > Light-weight anodised aluminum handles provided in 2 lengths - 35cm and 60cm
- > Quick connect handle mechanism for easy attachment after pass-through
- > Sterilisable by Autoclave or Gamma

### Isolator Cleaning Tool, Order information

PRODUCT	NUMBER	SIZE	SIZE HANDLES	TOOL/CASE
EasyClean® 360 Isolator Cleaning Tool	EC360.ICT.1	10x18cm Triangular	35cm & 60cm	1 Head & 2 Handles

### Isolator Cleaning Tool Mops, Order information

PRODUCT	NUMBER	MATERIAL	COVERS/PACK	PACKS/CASE
EasyClean® 360 Elastic Isolator Cleaning Tool Covers	EC360.EC.6	Super Polx ® 1200	25 elastic covers & 1 padded cover/pack	6 packs/case
Sterile EasyClean® 360 Elastic Isolator Cleaning Tool Covers	EC360.ECST.20 (Sterile)	Super Polx ® 1200	10 elastic covers & 1 padded cover/pack, 4 packs/cracker pack	5 cracker packs/case
EasyClean® 360 Nonwoven Isolator Cleaning Tool Covers	EC360.NW.40	Nonwoven Polyester/ Cellulose	5 covers/pack, 4 packs/ bag	10 bags/case
Irradiated EasyClean® 360 Nonwoven Isolator Cleaning Tool Covers	EC360.NW.1IR (Irradiated)	Nonwoven Polyester/ Cellulose	1 cover/pack, 20 packs/bag	10 bags/case

## BCR® GI Face Masks



People are the greatest source of contamination and breathing or speaking are among the most contaminating activities. Masks play a critical role in minimising such contamination. Berkshire masks are manufactured to the highest quality standards, offering consistent performance every time. Our masks are made with three layers, combining maximum comfort for the wearer while ensuring maximum protection for process. All the materials used are low in particles and fibers but also free of surfactants and chemicals.

### APPLICATIONS

- > ISO Class 4-8 / EU Grade A-D
- > Sterile applications

### KEY BENEFITS

- > Individually packed
- > Gamma Irradiated with a minimum dose of 25kGy
- > Wide sizes available
- > Comfortable
- > Ultrasonic bonding to reduce contamination and outgassing
- > Certificates of Irradiation available online, by lot number at [www.berkshire.com](http://www.berkshire.com)
- > Easy to breathe

### Quick Overview of BCR® GI Face Masks

MODEL	BCR® GI FACE MASK WITH EARLOOPS	BCR® GI FACE MASK WITH HEAD TIES
Inner facing	Viscose/polyester	Viscose/polyester
Outer facing	Viscose/polyester	Viscose/polyester
Filter media	Polyester	Polyester
Nose piece	Enclosed Aluminium	Enclosed Aluminium
Masks Sizes	180x90mm 210x90mm	180x90mm 210x90mm



## BCR® Face Masks



Berkshire's face masks minimise human contamination by providing very high levels of particle and bacterial filtration. The 210mm wide masks provide extra face coverage and protection. Berkshire's BM 1 and BM 1W are both individually packed and contain a clip for linking the earloops behind the head when desired.

### KEY BENEFITS

- > Comfortable
- > Wide sizes available
- > Easy to breathe

### APPLICATIONS

- > ISO Class 4-8 / EU Grade B-D / Class 10 - 100,000

### Quick Overview of BCR® Face Masks

MODEL	BM 1 & BM 1WIDE	MASK CE-3PEL.W	BM.1FWE.50	MASK CE-3P4T.15
Inner facing	Polypropylene	Polypropylene	Polypropylene	Polypropylene
Outer facing	Polypropylene	Polymeric net	Polyethylene	Polymeric net
Filter media	Polypropylene	Polypropylene	Polypropylene	Polypropylene
Material Loop	Polyurethane Earloops	Polyurethane Earloops	Knitted Nylon earloops	Polypropylene Head Ties
Nose piece	PVC coated wire	PVC coated wire	PVC coated wire	PVC coated wire
Masks Sizes	180x90mm 210x90mm	210x90mm	180x90mm	180x90mm

## BCR® Glove Liners



Comfortable hands are critical to an operator's productivity. Gloved hands free of perspiration and allergies are also vital to an operator's health and safety. BCR® Glove Liners were developed to provide this comfort. Worn underneath latex, vinyl or nitrile gloves, BCR® Glove Liners provide a space between skin and glove that allows the hands to breathe.

The gloves are ambidextrous. Each glove size has a coloured cuff for easy stock control. The half-finger versions are ideal for operators who need to retain maximum dexterity and fingertip sensitivity. BCR® Glove Liners are manufactured to the highest standards, offering consistent performance every time. The liners are made out of 100% continuous filament polyester, laundered to reduce particle and fiber release and are available in 2 sizes to maximise comfort. There are no seams on the gloves that could unravel and cause contamination.

They are medium weight and are soft and comfortable to wear for long periods. The liners can be re-laundered and used again.

The BCR® Glove Liners are suitable in any ISO class cleanroom when worn underneath nitrile, latex or vinyl gloves.

### KEY BENEFITS

- › Soft and comfortable
- › Full and half-finger options
- › Large and regular sizes
- › Seamless no-run construction
- › Ambidextrous
- › Sterilisable by Autoclave or Beta

## BCR® Bond Cleanroom Paper



BCR® Bond cleanroom paper is made with the purest quality cellulose from specially selected forests and is precisely coated to minimise particle and fiber release. BCR® Bond comes in a variety of weights and colours, from heavy weight 104g paper for extra tear resistance and opacity to allow double sided printing, to lighter weight 68g for economy.

### APPLICATIONS

- > ISO Class 3-7 / EU Grade B-D / Class 1-10,000
- > Writing, copying and printing

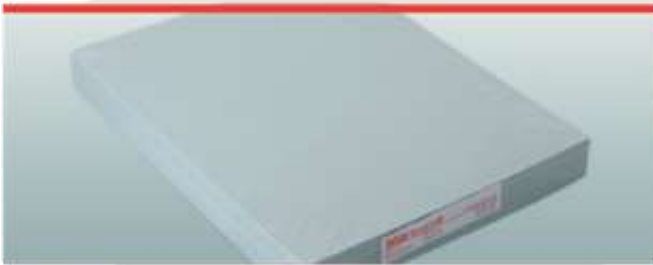
### KEY BENEFITS

- > Purest cellulose to minimise contamination
- > Specialised coating to reduce particles, fibers and micro-organisms
- > Smooth surface reduces particle contamination
- > Compatible with all standard copiers and printers
- > Retains ink from copiers and printers to reduce smudging
- > Available in 3 different weights (104gr, 85gr and 68gr)
- > Double packed for cleanliness
- > Sterilisable by Autoclave\* and Gamma
- > \* Blue coloured paper is not autoclavable

### NON-STANDARD OPTIONS

- > Berkshire is a flexible manufacturer and we are always willing to consider requests for non-standard products
- > **Sizes:** Berkshire can supply non-standard sizes to your specification
- > **Format:** Berkshire can supply pre-punched paper
- > **Packaging:** Non-standard packaging can be provided

## EcoBond® Recyclable Cleanroom Paper



EcoBond® is a fully recyclable version of BCR® Bond cleanroom paper. EcoBond® is made from the same pure sources of cellulose as our standard BCR® Bond cleanroom paper.

### APPLICATIONS

- > ISO Class 3-7 / EU Grade B-D / Class 1-10,000
- > Writing, copying and printing

### KEY BENEFITS

- > 100% virgin cellulose
- > Low in particles and fibers
- > Smooth surface reduces particle contamination
- > Compatible with all standard copiers and printers\*
- > Lot number for tracing

- > Double packed for cleanliness
- > Sterilisable by Autoclave\*\* and Gamma
- > \* Not recommended for use with inkjet printers
- > \*\* Blue coloured paper is not autoclavable



## BCR® CleaNotes®



BCR® CleaNotes® are made with 104g/m<sup>2</sup> weight cleanroom white bond paper. A special adhesive backing allows CleaNotes® to easily stick to any surface without leaving residues when the note is removed.

### APPLICATIONS

- > ISO Class 3-7 / EU Grade B-D / Class 1-10,000
- > Small notes and reminders

### KEY BENEFITS

- > 104g/m<sup>2</sup> weight cleanroom white bond paper
- > Low in particles and fibers
- > Smooth surface reduces particle contamination

- > Adhesive designed specifically not to leave unwanted residues behind
- > Silicone free

## BCR® MyNotes Notebooks



BCR® MyNotes Notebooks are made with Berkshire's BCR® Bond cleanroom paper to minimise particle contamination. They are made with a spiral binding for easy use.

### APPLICATIONS

- > ISO Class 3-7 / EU Grade B-D / Class 1-10,000
- > Note taking, data recording

### KEY BENEFITS

- > 85g/m<sup>2</sup> weight BCR® Bond
- > Purest cellulose to minimise contamination
- > Low in particles and fibers

- > Smooth surface reduces particle contamination
- > Lot number for tracing
- > Double packed for cleanliness

Berkshire's Lab-Tips® Cleanroom swabs are designed to minimise and remove cleanroom contamination in a wide range of applications. The wide variety of handle lengths and tip shapes ensures the most difficult spots can be reached and cleaned. Both tips and handles are made with the highest quality cleanroom materials to minimise particle and fiber contamination.

#### APPLICATIONS

> Cleaning validation and precision cleaning

KNITTED SWABS	NUMBER	MATERIAL	TIP SIZE	HANDLE SIZE	TOTAL SIZE	SWABS/PACK	PACKS/CASE
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LTP125	LTP125.5	Polyester	25mm	100mm	125mm	100	5
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LTP70F	LTP70F.20	Polyester	11mm	59mm	70mm	100	20
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LTP70R	LTP70R.20	Polyester	11mm	59mm	70mm	100	20
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LTP1465	LTP1465.10	Polyester	17mm	145mm	162mm	100	10
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POLYESTER SWAB	NUMBER	MATERIAL	TIP SIZE	HANDLE SIZE	TOTAL SIZE	SWABS/PACK	PACKS/CASE
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BCS 100	BCS100	Polyester	13mm	76mm	89mm	20	50
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TOC/SAMPLING SWABS	NUMBER	MATERIAL	TIP SIZE	HANDLE SIZE	TOTAL SIZE	SWABS/PACK	PACKS/CASE
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LTP125TOC	LTP125TOC.25	Knitted Polyester	25mm	100mm	125mm	20	25
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LTP125S	LTP125S.25	Knitted Polyester	25mm	100mm	125mm	20	25
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NONWOVEN SWABS	NUMBER	MATERIAL	TIP SIZE	HANDLE SIZE	TOTAL SIZE	SWABS/PACK	PACKS/CASE	
	LTN1465	LTN1465.10	Polyester	17mm	145mm	162mm	100	10
	LTN70F	LTN70F.20	Polyester	11mm	59mm	70mm	100	20
	LT170183	LT170183.30	Abaca / Wood Pulp Blend (Labx® 170)	21mm	46mm	67mm	100	30
	LT670183	LT670183.30	Polyester/Cellulose (Durx® 670)	20mm	47mm	67mm	100	30

FOAM SWABS	NUMBER	MATERIAL	TIP SIZE	HANDLE SIZE	TOTAL SIZE	SWABS/PACK	PACKS/CASE	
	LTC125	LTC125.5	Polyurethane Foam, Closed-Cell	25mm	100mm	125mm	100	5
	LT000125	LT000125.10	Polyurethane Foam, Open-Cell	25mm	100mm	125mm	100	10
	LTO1465	LTO1465.10	Polyurethane Foam, Open-Cell	17mm	145mm	162mm	100	10
	LT001163	LT001163.30	Polyurethane Foam, Open-Cell	21mm	49mm	70mm	100	30
	LTA03163	LTA03163.10	Polyurethane Foam, Open-Cell	13mm	60mm	73mm	100	10
	LTO70P	LTO70P.20	Polyurethane Foam, Open-Cell	20mm	50mm	70mm	100	20



ESD SWABS	NUMBER	MATERIAL	TIP SIZE	HANDLE SIZE	TOTAL SIZE	SWABS/PACK	PACKS/CASE
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LTP1465ESD10	LTP1465ESD10	Knitted Polyester	17mm	145mm	162mm	100	10
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LTO70PESD20	LTO70PESD20	Polyurethane Foam, Open-Cell	20mm	50mm	70mm	100	20
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LTO70RESD20	LTO70RESD20	Polyurethane Foam, Open-Cell	12mm	58mm	70mm	100	20
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## WHITEGUARD DRY WIPES

### ISO 3 & 4 WIPES

#### POLYESTER

##### WHITEGUARD 3

High performance 100% knit continuous filament Polyester ultra low linting wiper with thermally sealed edges to trap particulate and contain moisture. Widely used in Semiconductor, Pharmaceutical, Aerospace & Medical device industries  
Options: Laser sealed edges / Ultrasonically sealed borders.

##### WHITEGUARD 5

Microdenier wipes constructed from continuous filament blended nylon and polyester with ultrasonic sealed edges. High yarn-to-dust contact surface area plus wedge-shaped cross section ensure excellent wiping efficiency. Used in lens and screen manufacture.

##### DUAL LAYER WHITEGUARD 11

Cleanroom laundered, two-ply quilted, 100% continuous-filament polyester knitted in a double-knit interlock pattern. Two-ply construction offers high sorbency capacity with ultrasonic sealed border edges to prevent particle and fibre release. High grade spill control.



Non Sterile Code	Sterile Code	Description	Size	ISO	Pack Qty	Case Qty
WNTG05012		WhiteGuard 3 Wipes 12" x 12" (300mm x 300mm)	12" x 12"	ISO4	150	10 x 150
	WSTG05012	WhiteGuard 3 Wipes 12" x 12" (300 x 300mm)	12" x 12"	ISO3	50	10 x 50
WNTG04009		WhiteGuard 3 Wipes 9" x 9" (228 x 228mm)	9" x 9"	ISO3	100	10 x 100
WNTG05009		WhiteGuard 3 Wipes 9" x 9" (228 x 228mm)	9" x 9"	ISO4	150	10 x 150
WNMD04009		WhiteGuard 5 Wipes 9" x 9" (228 x 228mm)	9" x 9"	ISO3	100	10 x 100
MHPEN505		WhiteGuard 11 Wipes 12" x 12" (300mm x 300mm)	12" x 12"	ISO3	50	4 x 50
	WSPW60500	WhiteGuard 11 Wipes 12" x 12" (300mm x 300mm)	12" x 12"	ISO3	20	5 x 20

As a guide for customers, the non-sterile has indicated the highest classification of cleanroom each product would typically be used in.

## WHITEGUARD < DRY WIPES

ISO 5 & 6 WIPES

### POLY-CELLULOSE WIPES

Poly-Cellulose wipes are specifically designed to deliver a combination of cleanliness and absorbency, achieved by the low linting characteristics of Polyester coupled with the high liquid retention rates from the properties of Cellulose.

### WHITEGUARD 2

45% Polyester to 55% Cellulose blend. WhiteGuard 2 has improved absorbency, with low linting properties. Available in a variety of sizes and pack formats. WhiteGuard 2 is a multipurpose wipe for ISO6+ clean areas.



### WHITEGUARD 7 (WIPER ROLL)

Highly absorbent, low linting Poly-Cellulose wiper roll with perforated edges. Ideal for support areas where particulate control is necessary, especially where a high volume or density of wipes are required. Well suited to lab applications and low grade cleanroom production facilities. 200 sheets per roll, blue or white.

### WHITEGUARD 8

Designed for tightly controlled applications focusing on cleanliness and particulate manufacturing or compounding environments.

### INDUSTRIAL WIPES

#### WHITEGUARD 6

Aggressive Meided Nylon wiper with a diamond textured surface to provide good abrasion. Ideal for machine cleaning, de-greasing and spill control in clean industrial areas.



Non Sterile Code	Sterile Code	Description	Size	ISO	Pack Qty	Case Qty
WNWG04012		WhiteGuard 2 12" x 12" (300mm x 300mm) Flat Packed	12" x 12"	ISO6	100	20 x 100
	WSWG04012	WhiteGuard 2 12" x 12" (300mm x 300mm) Flat Packed	12" x 12"	ISO6	100	10 x 100
WNWG04009	WSWG04009	WhiteGuard 2 9" x 9" (228mm x 228mm) Flat Packed	9" x 9"	ISO6	100	10 x 100
WNWG06009		WhiteGuard 2 9" x 9" (228mm x 228mm) Flat Packed	9" x 9"	ISO6	300	16 x 300
WNWG04005		WhiteGuard 2 5" x 4" (127x102mm) Flat Packed	5" x 4"	ISO6	100	10 x 100
WNMN04012		WhiteGuard 6 12" x 12" (300mm x 300mm)	12" x 12"	ISO7	100	10 x 100
WNMN04008		WhiteGuard 6 10" x 8" (254x203mm)	10" x 8"	ISO7	100	10 x 100
WNPW81010		WhiteGuard 7 Roll White 200 sheets per roll	10" x 15"	ISO6	1	2 x 1 Roll
WNPW81010		WhiteGuard 7 Roll Blue 200 sheets per roll	10" x 15"	ISO6	1	2 x 1 Roll
WNCS93012	WCS93012	WhiteGuard 8 12" x 12" (300mm x 300mm) Flat Packed	12" x 12"	ISO5	25 x 4	17 x 25 x 4
	WSVW12012	WhiteGuard 8 12" x 12" (300mm x 300mm) C-Folded	12" x 12"	ISO5	10 x 10	14 x 10 x 10
WNCS93009	WCS93009	WhiteGuard 8 9" x 9" (228mm x 228mm) Flat Packed	9" x 9"	ISO5	300	8 x 300
	WSVW11009	WhiteGuard 8 9" x 9" (228mm x 228mm) C-Folded	9" x 9"	ISO5	10 x 100	27 x 10 x 10

4 x guide to customers. \*ISO cleanliness has indicated the highest classification of cleanroom each product would typically be used in.



## VERIGUARD PRE-SATURATED WIPES

DISINFECTANT PRE-SATURATED

WITH A COMPREHENSIVE RANGE OF SUBSTRATES, DISINFECTANTS AND FORMATS, MICRONCLEAN CAN MEET ALL OF THE CLEANROOM REQUIREMENTS FOR PRE-SATURATED WIPES



### SUBSTRATES

#### VERIGUARD 1 - POLYPROPYLENE

Most abrasive, lightweight and cost-effective, available in tub, pouch and silver pack formats.

#### VERIGUARD 2 & 8 POLY-CELLULOSE

High absorbency from the 55% cellulose, low linting from 45% Polyester, strong multifunctional wipe.

#### VERIGUARD 3 - POLYESTER

Heavy density, thermally sealed edges to trap particulate and retain cleaning solution. High grade fabric.

### DISINFECTANTS

#### IPA

70% isopropanol alcohol blended with 30% DI or WFI.

#### IMS

70% denatured ethanol blended with 30% DI or WFI.

#### ALPHA

Rotational biocide.

#### BETA

Rotational biocide with sporicidal action, non-corrosive.

### PACKAGING FORMATS

#### TUB

Lower grade clean areas. For high volume usage, aggressive and intricate cleaning (especially equipment and parts) and long lasting alcohol retention. Double bagged when supplied as a sterile product.

#### POUCH

Full range of substrates and alcohols available in pouch format, varied pack sizes, re-sealable adhesive flap.



Non Sterile Code	Sterile Code	Description	Size	ISO	Pack Qty	Case Qty
WNVG05020	WSVG05020	VeriGuard 1: Polypropylene IPA/DI Tub Wipe	8" x 8"	ISO5	200	12 x 200
	WSVG07020	VeriGuard 1 Polypropylene IMS/DI Tub Wipe	8" x 8"	ISO5	200	12 x 200
WNVG04023	WSVG04023	VeriGuard 2: Poly-cellulose IPA/DI Pouch Wipe	9" x 9"	ISO4	100	8 x 100
WNVG09023	WSVG09023	VeriGuard 2: Poly-cellulose IMS/DI Pouch Wipe	9" x 9"	ISO4	100	8 x 100
WNVG15020		VeriGuard 3: Polyester IPA/DI Pouch Wipe	8" x 5"	ISO4	30	15 x 30
	WSAP01009	VeriGuard 8 Poly-cellulose with Alpha Biocide	9" x 9"	ISO4	15	10 x 15
	WSBT02009	VeriGuard 8 Poly-cellulose with Beta Biocide/Sporicide	9" x 9"	ISO4	15	10 x 15
	WSCW91009	VeriGuard 8 Poly-cellulose IMS/WFI	9" x 9"	ISO4	15	40 x 15
	WSCW92009	VeriGuard 8 Poly-cellulose IPA/WFI	9" x 9"	ISO4	15	40 x 15
	WSCW96ZZZ	VeriGuard 9 Silver Pack Polypropylene Viscose IPA WFI	8" x 9"	ISO5	200	8 x 200
	WSCW97ZZZ	VeriGuard 9 Silver Pack Polypropylene Viscose IMS/WFI	8" x 9"	ISO5	200	8 x 200
WNVG1111		VeriGuard 15 Polyester IPA/DI Pouch Wipe	1" x 1"	ISO4	1	1 x 1

As a guide to customers, Micronclean has indicated the highest classification of cleanroom each product would typically be used in.

## > CLEANGUARD ALCOHOLS & DETERGENTS

### IPA, IMS AND NON IONIC DETERGENT

#### ALCOHOLS

##### CLEANGUARD 1 IPA

70% Isopropanol Alcohol with 30% Water for Injection (WFI), sterilised by Gamma Irradiation.

##### CLEANGUARD 2 IMS

70% De-natured Ethanol with 30% Water for Injection (WFI), sterilised by Gamma Irradiation.

##### CLEANGUARD 11 IPA

70% Isopropanol Alcohol with 30% Deionised Water.

##### CLEANGUARD 12 IMS

70% De-natured Ethanol with 30% Deionised Water.

#### NON IONIC DETERGENT

##### CLEANGUARD 5

Non Ionic Detergent with Isopropanol and Deionised Water for the effective cleaning of sensitive components, equipment or areas that must avoid aggressive acid or alkaline chemicals. Can be supplied sterilised by Gamma Irradiation.

#### DEMINEALISED WATER

##### CLEANGUARD 6 DI WATER

An 0.2 micron filtered deionised water for the effective dilution of solutions and chemicals, and for cleaning applications in the micro-electronics industry. Can be supplied sterilised by Gamma Irradiation.

#### DELIVERY FORMATS

##### TRIGGER SPRAYS

Available in 500ml, 950ml or 1L sizes, our comfortable and easy to use trigger heads, provide the best application directly onto surfaces.

Each triggers' hold up volume is less than 0.3% significantly better than any other product on the market. Integral gore filter, hermetically sealed and cleanroom double bagged.

#### 5 AND 25 LITRE RFU

Bulk 5L and 25L RFU (ready for use) container pre-mixed ready for direct application.

#### STERILISED BY GAMMA IRRADIATION

Gamma irradiated with a minimum dose of 25kGy.



Non Sterile Code	Sterile Code	Description	Size	ISO	Pack Qty	Case Qty
	ZSAL64499	CleanGuard 1 Trigger Sprays IPA / WFI	500ml	ISO4	Each	24
	ZSAL64950	CleanGuard 1 Trigger Sprays IPA / WFI	950ml	ISO4	Each	15
	ZSAL64005	CleanGuard 1 5 Litre IPA / WFI	5 Litre	ISO4	Each	2
	ZSAL65499	CleanGuard 2 Trigger Sprays IMS / WFI	500ml	ISO4	Each	24
	ZSAL65950	CleanGuard 2 Trigger Sprays IMS / WFI	950ml	ISO4	Each	15
	ZSAL65005	CleanGuard 2 5 Litre IMS / WFI	5 Litre	ISO4	Each	2
ZNND81001	ZSND81001	CleanGuard 5 Trigger Spray Low Ionic Neutral Detergent	1 Litre	ISO5	Each	6
ZNAL84001		CleanGuard 11 Trigger Spray IPA / DI Water	1 Litre	ISO5	Each	6
ZNAL84005		CleanGuard 11 IPA 70 / 30 DI Water	5 litre	ISO5	Each	2
ZNAL85001		CleanGuard 12 Trigger Spray IMS / DI Water	1 Litre	ISO5	Each	6
ZNDI82005	ZSDI82005	CleanGuard 6 RFU DI Water	5 Litre	ISO5	Each	1

As a guide to customers, MicronClean has indicated the highest classification of cleanroom each product would typically be used in.



### ROTATIONAL DISINFECTION SYSTEM CLEANGUARD 3 BETA

CleanGuard 3 Beta is the rotational cleanroom cleaner/ disinfectant agent to complement CleanGuard 4 Alpha. This product is a complex blend containing a unique amine based structure, blended with fully non-toxic, biodegradable detergent. The formulation does not contain any hazardous aldehydes or chlorine generating components. The formulation is highly effective as a cleaner and disinfectant against bacteria, mycobacteria, fungi, viruses and spores. The mode of action exhibited by CleanGuard 3 Beta has been shown to be via disruption of the RNA of the micro-organisms and prevents resistance being built up. It is safe to use on any surface and is low odour and colourless.

### CLEANGUARD 4 ALPHA

A synergistic blend of quaternary ammonium compounds, CleanGuard 4 Alpha is a highly effective, colourless, odour-free, non-staining, non-tainting one step disinfectant / detergent for the cleaning and disinfecting of all hard surfaces including metal, glass, plastics, rubbers and polymers. The mode of action for CleanGuard 4 Alpha is via denaturing of micro-organism proteins and effects on the metabolic pathways. CleanGuard 4 Alpha is a broad-spectrum biocide and is effective against bacteria and fungi.

### DELIVERY FORMATS UNIT DOSE

50ml or 250 ml concentrate for dilution in DI water or WFI, to make 5 litres of active ingredient. Most suited to mopping applications where active ingredient efficacy is paramount. Single use only.

### TRIGGER SPRAYS

Available in 500ml size, our comfortable and easy to use trigger heads, provide the best application directly onto surfaces. Each triggers' hold up volume is less than 0.3% significantly better than any other product on the market. Integral gore filter, hermetically sealed and cleanroom double bagged.

### 5 LITRE RFU

Bulk 5L RFU (ready for use) container with pre-mixed solution ready for direct application.



Sterile Code	Description	Size	ISO	Pack Qty	Case Qty
ZSBT04005	CleanGuard 3 Beta 5 Litre RFU Sterile	5 Litre	ISO3	Each	2
ZSBT02500	CleanGuard 3 Beta 500ml Trigger Spray Sterile	500ml	ISO3	Each	6
ZSBT06001	CleanGuard 3 Beta 250ml Unit Dose Sterile	250ml	ISO3	Each	10
ZSAP03005	CleanGuard 4 Alpha 5 Litre RFU Sterile	5 Litre	ISO3	Each	2
ZSAP01500	CleanGuard 4 Alpha 500ml Trigger Spray Sterile	500ml	ISO3	Each	6
ZSAP05001	CleanGuard 4 Alpha 50ml Unit Dose Sterile	50ml	ISO3	Each	10

As a guide to customers, Micronclean has indicated the highest classification of cleanroom each product would typically be used in.





## TRIGGER SPRAY TECHNOLOGY

### DIFFERENCE IS CLEAR

Microclean unique trigger spray bottle has a range of features that make it ideal for use within the pharmaceutical environment.

#### Filtered Vent

Ensures sterile delivery for up to 12 weeks after opening

#### Securely Tightened

Cap is secured with the same force to avoid overtightening while preventing leaks

#### Ergonomic Trigger Lever

Reduces finger stress during repeated operations

#### Visible Ergonomic Bottle Design

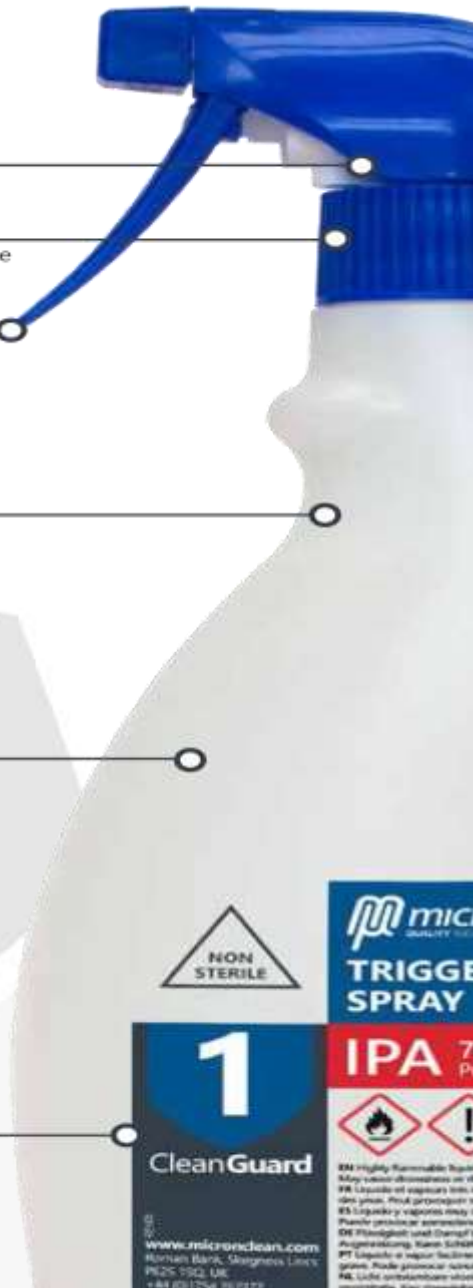
Optimised for ease of use

#### Transparent Bottle

Remaining liquid level is always visible

#### Integrated Language Label

Integrated label removes the need for additional paperwork





## CLEANGUARD 1 AND 2 ALCOHOL TRIGGER SPRAYS

### FEATURES

- Translucent ergonomic bottle
- 0.2 micron filtered at point of fill
- Maintains sterility for 12 weeks
- IPA available in sterile and non-sterile forms
- Double bagged
- 70% IPA or 70% IMS blended with WFI quality water

Non Sterile Code	Sterile Code	Description	Size	Pack Qty	Case Qty
	ZSAL64499-A/I	IPA 500ml Trigger Spray Sterile	500ml	Each	24 x 500ml
	ZSAL64950-A/I	IPA 950ml Trigger Spray Sterile	950ml	Each	15 x 950ml
ZNAL64499-A/I		IPA 500ml Trigger Spray Non-sterile	500ml	Each	24 x 500ml
ZNAL64950-A/I		IPA 950ml Trigger Spray Non-sterile	950ml	Each	15 x 950ml
	ZSAL65499-A/I	IMS 500ml Trigger Spray Sterile	500ml	Each	24 x 500ml
	ZSAL65950-A/I	IMS 950ml Trigger Spray Sterile	950ml	Each	15 x 950ml



## CLEANGUARD 3, 4 AND 5 ALPHA, BETA AND DELTA TRIGGER SPRAYS

### FEATURES

- Translucent ergonomic bottle
- 0.2 Micron filtered at point of fill
- Double bagged
- Maintains sterility for 12 week

Non Sterile Code	Sterile Code	Description	Size	Pack Qty	Case Qty



## > PUREGUARD MOPPING SYSTEM

### DRY & PRE-SATURATED MOPPING SYSTEM

#### BUCKETLESS MOPPING SYSTEM

The PureGuard Mopping System is a fully validated bucketless process designed to reduce contaminants from the cleanroom and improve cGMP compliance. The system eliminates exposed chemical and soiled water from your cleaning process, whilst also removing the need for operators to mix/dilute cleaning chemicals.

PureGuard utilises pre-dosed disposable micro-fibre mops that are tested and validated for a 15m<sup>2</sup> coverage of floors, walls and ceilings. The mops are evenly and uniformly dosed in an ISO4 filling area, clean packed, double bagged and sterilised by Gamma Irradiation. As the mops are pre-dosed they are equally effective when used singularly for smaller spaces or as part of a trolley based system for the cleaning of larger areas.



# PUREGUARD < MOPPING SYSTEM

DRY & PRE-SATURATED MOPPING SYSTEM

## MOP HANDLES

### STAINLESS STEEL FIXED LENGTH

142cm fixed length handle made from 304 stainless steel with tig welded end cap and fixing hole to attach mop frame.

### TELESCOPIC ALUMINIUM

Telescopic mop handle extendable from 86.5 to 160cm with fixing hole to attach to the mop frame, twist lock to adjust length and lock. Durable and chemical resistant.

## MOP FRAME

All our mop frames are compatible with cleaning on floors, walls, ceilings and confined areas such as corners and stairs and permits "S" motion mopping.

### STAINLESS STEEL SHROUDED

Low profiled stainless steel mop frame for cleaning under fixtures and hard to reach surfaces. Continual surface contact at any angle, accurately balanced and non-flipping. Quick release frame-locking mechanism, enables easy replacement of contaminated mops.

### WIRE FRAME

Lightweight stainless steel wire frame enables easy loading of clean mops and simple disposal of contaminated mops.

## DISPOSABLE MOP MATERIAL :

### SHORT PILE MICROFIBRE

Designed for cleanroom applications up to ISO Class 4, this very low shedding polyester microfibre mop has fully bound edges and due to the polyester reservoir holds enough disinfectant to provide 15m<sup>2</sup> cleaning and application coverage. Gamma irradiated. The rear side of the mop has 2 pockets to enable a secure fit and hands free connection to mop head.

## PRE-SATURATED MOPS:

### CLEANING AGENTS

Mops are uniformly dosed to achieve 15m<sup>2</sup> coverage with any of the following cleaning agents:

- PureGuard 4 Alpha
- PureGuard 3 Beta
- PureGuard 2 IMS
- PureGuard 1 IPA
- PureGuard 5 Neutral Detergent

## DRY MOPS

Mops can also be provided dry. Dry mops can be dosed on-site with alternative cleaning agents, however these will have to be validated independently to qualify the appropriate coverage.

- PureGuard 6 Mops Dry





## > CLEANING EQUIPMENT

### HARDWARE FOR THE MAINTENANCE OF CRITICAL ENVIRONMENTS

#### ISOLATOR CLEANING TOOL

A quick and efficient tool for the cleaning of compounding isolators, biological safety cabinets, laminar flow hoods, pass boxes, transfer hatches, air showers and other mini-environments. The Micronclean Isolator Cleaning Tool is made from durable 304 Stainless Steel and has a 360 degree swivel head. Handle made from smooth aluminium.

#### ISOLATOR CLEANING BONNET

Made from dual layer continuous filament 100% polyester, the Micronclean Isolator Cleaning Bonnet is designed to be easily applied to the Isolator Cleaning Tool and is laundered prior to use. The Polyester material ensures a high wiping performance, that is durable and low linting, whilst the dual layer provides absorbency. Sterilised by Gamma Irradiation. Tested to ASTM-D-629.

#### NILFISK GM80CR CLEANROOM VACUUM

Lightweight, portable and quiet, the GM80CR is perfect for use in cleanrooms, research labs and other critical environments. Four-stage filtration system includes a 10 Litre paper bag, main filter, microfilter and ULPA exhaust filter. A conductive hose and accessories provide ESD protection.

#### INCLUDED ACCESSORIES

- Detachable Trolley
- 10ft x 32mm Conductive Plastic Hose
- 2 Straight Stainless Steel Wands
- Floor Nozzle
- Conductive Dust Brush
- Conductive Crevice Nozzle
- Utility Nozzle
- Tool Caddy
- 30ft Power Cord
- Pack of 5 Paper Bags





# SUREGUARD < DISPOSABLE GARMENTS

DISPOSABLE APPAREL FOR CLEAN ENVIRONMENTS



## SUREGUARD TYPE 5&6 CATEGORY III

SureGuard disposable apparel is the first defence in protecting your environment from airborne particulate and your operators from the environment. Offering Category III chemical protection this low linting barrier fabric provides customers an economical alternative. SureGuard micro porous fabric is manufactured from Polypropylene with a Polyethylene laminate, affording high levels of cleanliness with a superior tensile strength. Water vapour transmission rates exceed those of other disposables providing superb comfort and breathability. CE marked to Type 5 & 6. SureGuard provides a cost effective option for disposable apparel without sacrificing quality.

## SUREGUARD GARMENTS

SureGuard is manufactured from two materials bonded together. The first material is a specially designed polypropylene textile that makes the material strong and hard to puncture. The second material is a film that has very small holes in it.

These holes will not permit chemicals to pass through but will permit air and water vapour to pass through; the fabric is therefore breathable and comfortable to wear.

The Polyethylene film ensures that the outside

of the suit is resistant to most chemicals and will not wet out.

The interior material will transport perspiration away from the wearer making it unique from the other products where moisture pools and drips.



## > FACEGUARD FACE & HEAD COVERINGS

### MASKS, SNOODS & CAPS

#### PLEATED FACE MASKS

##### FACEGUARD 1, 2 & 3

FaceGuard Pleated 3-Ply ES Face Masks, cleanroom manufactured and packed. Ultrasonic bonding ensures a cleaner mask by reducing contamination & outgassing. Filter centre layer manufactured from 18 gsm high density meltblown polypropylene. Inner and outer layer made from 17 gsm combined polymer ES.

FaceGuard 1 with ties.

FaceGuard 2 with ear loops.

FaceGuard 3 with head loop.

Particle filtration efficiency 97.6% @

0.1 $\mu$

Bacteria filtration efficiency 95.1% @ 3 $\mu$

#### FACEGUARD 4

FaceGuard Pouch Mask is designed to provide the wearer with additional comfort from an increased internal breathing chamber. Additional particle containment is offered from the extended neck veil. Outer and Inner layer made from 20gsm thermal calendared polypropylene, filter layer made from 20gsm melt blown polypropylene.

Particle filtration efficiency 98% @ 0.3 $\mu$

Bacteria filtration efficiency 99% @ 3 $\mu$

#### FACEGUARD 5

##### BEARD SNOODS

Beard Masks are made from soft spunbond nonwoven fabric. These hygienic masks have soft elastic ear-loops offering comfortable and effective barrier protection. They are available in white and one size fits all.

#### FACEGUARD 6

##### MOB CAPS

Pleated Mob Caps made from soft, thermally bonded polypropylene with enclosed, double elastics around the edge. Complete hair covering, one size fits all. Available in White or Blue.

#### Also available

Spunbond Polypropylene balaclava style hood for complete head covering.





# TUFFGUARD FOOTWEAR

## DISPOSABLE FOOTWEAR



### BLUE POLYTHENE OVERSHOES TUFFGUARD 2

The most cost-effective end of the disposable footwear market, Micronclean's Blue Polythene overshoes have undergone stringent quality checks to ensure that they are the most durable polythene overshoe available. Available in a 14" or 16" length cover, Heavy Duty polythene also available.

### TYVEK® OVERSHOES & OVERBOOTS

Tyvek overshoes and overboots consist of a tyvek upper area with a Tyvek or a PVC sole. The benefit of using Tyvek lies in its breathability properties, and combined with a PVC sole you have a high performance shoe in terms of particle retention and non slip combined with a highly comfortable product for the wearer. Additional benefits of Tyvek product is that they have ESD properties, can be laundered or irradiated and has the additional benefit of being antistatic

### TUFFGUARD PVC OVERSHOES TUFFGUARD 3

TuffGuard PVC overshoes are manufactured from 100 micron Gauge PVC, with an extra strength seam. The TuffGuard range of overshoes are the strongest and most durable disposable footwear product on the market. The textured surface of the overshoe give them superior non-slip properties, and the range of size options ensure a shoe cover that fits a wide range of shoe sizes. Available in Red or White and also available in a heavy duty 175 micron for more demanding environments.



### ANTISLIP OVERSHOES TUFFGUARD 6

These white overshoes are specifically designed to give superior non-slip performance in cleanroom environments.



## > TUFFGUARD FOOTWEAR

### CLEANROOM SHOES & CLOGS

#### CLEANROOM FOOTWEAR

##### TOFFELN STERI-KLOG

Long-lasting, strong thermoplastic, washable, unisex clog with non-slip sole, side vents and adjustable strap over the bridge. Can be autoclaved at temperatures of up to 134°C making them an ideal choice for visitors and short-stay personnel. The footbed shape allows feet to spread naturally.



##### TOFFELN PROFLEX SHOES

An electro static dissipative shoe made from 'Action-Breathe' uppers, a high-tech S2 material, stronger than leather, highly resistant, durable, waterproof and breathable. The Pro Flex Shoes are washable and also have a non-slip sole for added safety.



##### TOFFELN SAFETY LITE SHOES

Unisex leather shoe with side vent holes, shock absorbing heels with antistatic and slip resistant outsoles. Soft leather uppers and insoles will help give you all-day comfort.



## > SKINGUARD GLOVES

### STERILE GLOVES



SkinGuard 6

#### PAIR PACKED GLOVES

##### SKINGUARD 1

A sterile, powder free, polychloroprene glove designed to give unrivalled performance, **providing protection from chemicals, cytostatic drugs and biological agents** while offering a high level of wearer comfort. This is achieved by graduated thickness, which provides fingertip sensitivity without compromising the level of protection provided. The glove also incorporates surface treatment for improved donning and grip. Advanced technology produces an exceptionally soft and pliable material combined with excellent strength and integrity. The hand-specific shape of the glove is ergonomically designed for **comfort** and to **minimise hand fatigue**.



Kimtech Pure  
G3 Sterling

#### PAIR PACKED GLOVES

##### SKINGUARD 5

12" Natural Latex hand specific gloves, with beaded cuff and a textured surface. Packed in pairs.

With a thickness of 6.5mil ( $\pm 1$ ) and a tensile strength of 3335 psi / 23 mpa, SkinGuard 5 combines **durability** with **dexterity** for increased operator protection and sensitivity.

##### SKINGUARD 6

12" White Nitrile hand specific gloves with beaded cuff and textured surface, provide operator **comfort** and **flexibility**.

SkinGuard 6 is suitable for ISO3 pharmaceutical, medical and healthcare applications, particularly suited to processes that require sustained periods of wear.



SkinGuard 1

##### SKINGUARD 7

As SkinGuard 6 but with a 16" glove length for increased resistance and less chance of glove slippage.

##### KIMTECH PURE G3 STERLING

12" Grey Nitrile hand specific gloves with textured fingertip and beaded cuff, suitable for processes requiring **strength** and **puncture resistance**.

# SKINGUARD GLOVES

NON-STERILE GLOVES

## BOXED GLOVES

### SKINGUARD 2

Powder free boxed nitrile examination gloves for use in low grade clean areas and laboratories. Made from Carboxylated Butadiene Acrylonitrile (XNBR) with a textured surface.

**150 per Box / Beaded Cuff / Hypoallergenic**

- ASTM D3578-95
- EN 374 - 3
- N 374 - 2
- EN 455-1 & 2

## BULK PACKED GLOVES

### SKINGUARD 10

12" Natural Latex ambidextrous gloves, with beaded cuff and a textured surface. Bulk packed.

With a thickness of 6.5mil ( $\pm 1$ ) and a tensile strength of 3335 psi / 23 mpa, SkinGuard 10 combines **durability** with **dexterity** for increased operator protection and sensitivity.



SkinGuard 10

### SKINGUARD 11 & 12

12" White Nitrile ambidextrous gloves with beaded cuff and textured surface, provide operator **comfort and flexibility**.

SkinGuard 11 is suitable for ISO4 applications, achieving a liquid particle count (LPC) of <600 at 0.5 $\mu$ , whilst SkinGuard 12 is designed for ISO 6 areas achieving <1600 LPC at 0.5 $\mu$ .

### KIMTECH PURE G3 NXT

12" White Nitrile ambidextrous gloves with textured fingertip and beaded cuff, suitable for processes requiring **strength and puncture resistance**.



Kimtech  
Pure G3  
NXT

### SKINGUARD 13

Vinyl ambidextrous bulk packed gloves for use in a wide range of applications, including micro-electronics and food preparation and a range of non-critical applications.

**100 per pack / Anti-static  
Powder free / Easy to don**  
• ASTM D3578-95



## > MICRONCLEAN STERILE SYRINGE PACKS

QUALIFICATION, TRACEABILITY AND STERILISATION

**MICRONCLEAN** ARE REGISTERED TO BS EN ISO 13485:2003 WHICH COVERS EVERY ASPECT OF PRODUCTION AND DISTRIBUTION OF STERILE CE MARKED MEDICAL DEVICES.

### QUALIFICATION

Micronclean's sterile packs are highly qualified and proven devices. Baxter Healthcare, at their Thetford facility, package the products with Micronclean then controlling sterilisation, distribution and provision of all support functions to users.

The qualification of security of these devices is fully detailed and illustrated in the Sterile Pack Validation Support Guide. Please note Micronclean is the technical file holder for the Sterile Syringe Packs.

### TRACEABILITY AND STERILISATION

Full batch traceability and product certification is as standard. As each pouch of products has a single traceable batch number (traceable to all the sub-components batch numbers) the work of the technician in transcribing information is significantly reduced as is the potential for error. Sterilisation is by a fully validated gamma irradiation process. The product is supplied with a consolidated certificate of conformity.



### KEY FEATURES AND BENEFITS

FEATURES	BENEFITS
Single batches of syringes	Simplified paperwork with increased efficiency
Supplied in Vaporised Hydrogen Peroxide (VHP) proof packaging.	Significantly reduces the aeration time during the decontamination cycle in gassing isolators
Consolidated Certificate of Conformity	Single document, easy to file and cross reference
Quad laminate pouch	Transparent, strong, easy to open, works for VHP and alcohol transfer process
100% tipped syringes	Secure in usage
Broad heat seal	Burst resistant device packaging
Large stocks held by Micronclean	Security of supply
Logistics by Micronclean	Easy to set service up with low or no delivery charges
Storage	Proven 3 year shelf life

# MICRONCLEAN STERILE SYRINGE PACKS

SYRINGE SIZES AND PACKAGING



## PACKAGING

The syringes are supplied in transparent, easy-tear, quad laminate pouches which are VHP and alcohol impermeable, rendering them suitable for most transfer processes. In addition the syringes are all supplied with a 'tip protector' to protect the critical tip during storage and transit.

The syringe packs are double bagged to ensure an easy and rapid transfer cycle.

## BD Syringe Size - Use Volume

	1ml	3ml	5ml	10ml	20ml	30ml	50ml
<b>Pouch of 5 order code</b>	01ML05CC	03ML05CC	05ML05CC	10ML05CC	20ML05CC	30ML05CC	50ML05CC
No. of pouches per box	20	20	20	20	20	20	20
<b>Pouch of 10 order code</b>	01ML10CC	03ML10CC	05ML10CC	10ML10CC	20ML10CC	30ML10CC	50ML10CC
No. of pouches per box	10	10	10	10	10	10	10
<b>Pouch of 25 order code + CAPS Order Code</b>	01ML25CC	03ML25CC	05ML25CC	10ML25CC	20ML25CC	30ML25CC	50ML25CC
	01ML25CH	03ML25CH	05ML25CH	10ML25CH	20ML25CH	30ML25CH	50ML25CH
No. of pouches per box	10	10	10	10	20	20	20
<b>Pouch of 50 order code</b>	N/A	03ML50CC	05ML50CC	10ML50CC	20ML50CC	N/A	50ML50CC
No. of pouches per box	N/A	10	10	5	10	N/A	4
<b>Pouch of 65 order code</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A
No. of pouches per box	N/A	N/A	N/A	N/A	N/A	N/A	N/A



## MICRONCLEAN CUSTOM MADE PACKS

**MICRONCLEAN** ARE HAPPY TO DISCUSS ANY REQUIREMENTS YOU MAY HAVE FOR CUSTOM MADE PACKS WHICH INCORPORATE OTHER STERILE ANCILLARIES.

Typical ancillaries which might be included in a sterile pack include dispensing pins, fluid connectors and needles. All custom packs are supplied in transparent, easy-tear, quad laminate pouches which are VHP and alcohol impermeable rendering them suitable for most transfer processes.

### TRANSFER PROCESS

The transfer process is the process used when anything is transferred from an area of lower environmental grade to one of higher standard.

### ALCOHOL TRANSFER

The most common alcohols used are 70% IMS or 70% IPA.

The usual procedure is to spray, wipe the surface then spray again.

### VAPORISED HYDROGEN PEROXIDE(VHP) TRANSFER

Vaporised hydrogen peroxide(VHP) involves the vaporisation of the gas into the cabinet using a specialist machine. When the whole of the cabinet has been filled with the gas and all surfaces covered, the machine switches to pumping clean air. It is this process of air removing the gas from the surface that sanitises it.



### QUALIFIED FOR VHP AND ALCOHOL TRANSFER PROCESSES(1)

Double Bagged Product	Order Code	No./pouch	Pouches/box
Chemo Dispensing Pins (Braun)	CDPB25CC	25	4
Chemo Dispensing Pins (Braun)	CDPB05CC	5	10
Large Volume Dispensing Pin	LVDP10CC	10	10
2 Way Fluid Connector	2WFC10CC	10	10
Needles 19g x 1.5"	19GN50CC	50	10
Needles 21g x 1.5"	21GN50CC	50	10
Small Rubbish Bags	SBAG10CC	10	10
Hub Caps	CAPS50CC	50	10
Hub Caps	CAPS25CC	25	10
Ballpoint Pens	PEN005CC	5	20
2 Way Fluid Connector	2WFC10CC	10	10
Terumo Needle 19g x 1.5"	19TR10CC	10	20
Terumo Needle 19g x 1.5"	19TR50CC	50	10
Terumo Needle 21g x 1.5"	21TR25CC	25	20
Terumo Needle 21g x 1.5"	21TR50CC	50	10
Filter Needle	19FN25CC	25	10
Sterile Cleanroom Low Temperature Labels Flat Sheet	BCL200CC		
Sterile Cleanroom Printed Barcode Labels Flat Sheet	ENV200CC		

(1) Other sanitisation methods may be appropriate if qualified by the end user.



## > GUARDMARK STATIONERY

### CLEANROOM STATIONERY

#### GUARDMARK 4 MUNISING LP PAPER

GuardMark4 Munising LP readily accepts inks and laser printing without smudging. It features high opacity, good heat stability, chemical and moisture resistance and can be photocopied, sterilised or shredded. GuardMark4 accepts standard printing inks and requires no special procedures for printing other than those needed to keep the paper free from contamination. GuardMark 4 is ROHS compliant and can be sterilised by Gamma irradiation. Available in White , Blue and Green.

#### GUARDMARK 3 PAPER

GuardMark 3paper is a 72GSM paper designed for use in cleanrooms and controlled environments. With ultra low particle and fibre generating properties, low ionic content and excellent IPA resistance.

GuardMark 3 is a hard wearing clean paper, which is compatible with most inks for writing without smearing. In addition it is an excellent heat resistant material for laser printing and use in photocopiers. Available in White ,Blue, Pink, Yellow and Green

#### GUARDMARK 1 PENS

Anti-static Pens with a low ionic ink, clean packaged in 12s and double bagged. Available in Black and Blue, can be sterilised by Gamma Irradiation.

#### NOTE BOOKS

We offer a range of Notebooks in A4 and A5.



### CLEANROOM PACKAGING

#### STERILE GRIP SEAL BAGS

75 micron (300 gauge) polythene bags with a grip seal opening, clean packed and sterilised by gamma irradiation.

#### STERILE WASTE SACKS

Low density polyethylene (LDPE) 25 micron (100 gauge) cleanroom waste sacks - sterile.

#### TAPE

Micronclean offer a range of Tapes for use in cleanrooms, from vinyl construction tape for temporary partitioning and sealing, to wafer shipping tape and specialist tapes for the semiconductor and Healthcare industries. Available in varied colours and sizes. Clean packed. Also available sterile.

### CLEANROOM LABELS

#### LOW TEMPERATURE LABELS

Low temperature labels are designed for use with product that must be labelled and stored in fridges or freezers. With a maximum temperature of minus 40 degrees celcius. A6 backing sheets with 2 across and 10 down 45mm x 12mm white labels. TSE and Phthalate free. Clean packed and sterilised by gamma irradiation.

#### BARCODE LABELS

Pre-printed sterile barcode labels with a pre-determined sequence, 16 labels per fat sheet. Perforated down the centre Also available on a reel upon request.

### IRRADIATION INDICATORS

Gammatrix irradiation sterilisation indicators are Class 1 process indicators, manufactured in compliance with ISO 11140-1:2005 "Sterilisation of health care products - Chemical indicators". Gammatrix gamma sterilisation indicators undergo a simple yellow to red colour change when exposed to gamma radiation.

They are used in the industry as qualitative process indicators for the gamma irradiation sterilisation process. Processed labels can also be retained as part of a quality control validation record.





## > GUARDTACK ROLLERS

### TACKY ROLLERS

#### TACKY ROLLERS

Tacky Rollers are designed to easily remove dust and particulate from cleanroom surfaces such as walls, ceilings and other hard to reach areas. Tacky rollers are a popular cleaning tool for controlled environments used as a time saving alternative to traditional mop systems, with an anti-microbial agent they also provide long-lasting protection against bacterial growth. They can also be used as an effective tool to remove particulate from sensitive components in electronics manufacturing.

Tacky rollers are produced on a plastic inner core and contain perforated film or foam tear-away sheets that are easy to remove, exposing the next clean sheet.

#### FOAM ROLLER REFILLS

A polyethylene foam, used for textured or uneven surfaces, the foam refill adapts to the surface that it is rolled over, ensuring surface contact and particle collection. Available in 9" or 18" widths.

#### FILM ROLLER REFILLS

3mm Polyethylene Film Roller refills. Used for flat surfaces. Available in 9" or 18" widths.

#### TACKY ROLLER HANDLES

Heavy Nickel coated metal handle and plastic grip.

#### TACKY ROLLER EXTENSION HANDLES

Metal extension pole for tacky roller mop handles. Ideal for hard to reach places in the cleanroom such as walls and ceilings. The Tacky Roller Mop Extension Pole is extendable from 122cm to 244cm.





# GUARDTACK <MATS

ENTRY MATS: CONTROLLING FOOT-BORNE AND WHEEL-BORNE CONTAMINATION



## GUARDTACK DISPOSABLE PEEL OFF MATS

GuardTack Mats are the ideal way to control footborne or wheel borne contamination in areas of transfer from lower grade to higher grade areas and environments. Manufactured from a Low Density Polyethylene, 30 sheets per mat, with a pressure sensitive adhesive that contains a spore growth retardant to ensure there can be no bacterial growth on the mat. Available in Low Tack (4 mats per case) or Medium Tack (8 mats per case), in White, Blue or Grey with numbered tabs to denote remaining sheets.

## GUARDTACK PERMANENT MATTING

GuardTack Mats are a permanent, washable, tack regenerating floor covering designed specifically for the removal of between 98-100% of even the finest foot and wheel borne contamination. Available in any size with a vinyl weld which creates a contamination free seam.

Can be applied as a floor covering or used as a permanent mat (framed on request). No peel off layers meaning no risk of static damage. Just mop, rinse, squeegee and let dry. 100% of the tack is regenerated when cleaned properly.

Multiple applications: Inside/outside  
Cleanroom areas, air showers, gown rooms and entry / hallways.



## CLEAN ROOM

Innovation applied to  
sterilizable devices

## CLEAN ROOM

### Innovation applied to sterilizable devices

A clean room is an environment subject to a contamination control, commonly used in the pharmaceutical, biotechnology and electronics industries or in scientific research.

This area has to possess the minimum level of contamination, defined by the maximum number of particles per cubic meter with specific grain size: this can be achieved and maintained only by controlling the environment, the workforce, the products and the processes within these rooms.

In the same way a specific risk assessment program must define which features the PPE should have to ensure the operator the proper protection from potential contact with hazardous substances.

#### DOUBLE PROTECTION



### Univet: specialization and evolution

In the early 2000s Univet introduced the first sterilizable goggles specifically developed for clean rooms.

Over the years the continuous drive towards innovation led the R&D internal department to create a full range of products with technical solutions able to meet the particular requirements of the clean room market.



**FOCUS**



**INNOVATION IN MATERIALS**



**COMPLETE RANGE**



# CONSOLIDATED TECHNOLOGY

## DIRECTLY & INDIRECTLY VENTILATION

To ensure air circulation within the goggle in order to prevent the formation of condensation on the lens, two technical solutions are available.

A directly ventilated goggle has openings on its frame which allow the directly flow of air between the outside and the inside of the goggle. The openings on the frame ensure maximum air circulation in order to minimize the fogging.

The other option is a goggle with indirectly ventilation which has openings on its structure that are protected by technical solutions able to guarantee protection against drops and splashes of liquids.



## OVER THE GLASSES AND RX INSERT

Univet supports a specific market demand

# INNOVATIVE TECHNOLOGY

## NEW MATERIAL

Univet has developed **βyoxene®**, a material with unique chemical-physical characteristics, able to maintain its original transparency even after multiple cycles of sterilization according to the usual techniques by beta or gamma rays. Tests confirm that after twenty sterilization processes **βyoxene®** lens suffers a reduction in luminous transmittance of less than 1%. This is less than polycarbonate loses after only one cycle.



**βyoxene®**



AF<sup>121</sup> COATING

The usual treatments applied to the lenses

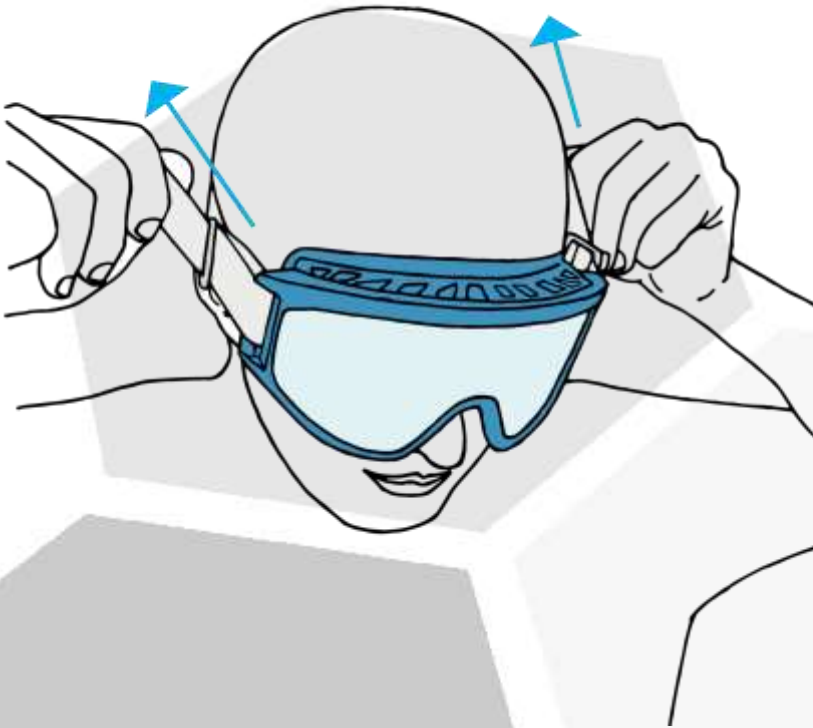
## QUICK&SMOOTH ELASTIC BAND

The new elastic band ensures maximum stability thanks to a special superficial micro texture while the use of a special anti-static silicone provides greater elasticity for optimal comfort. The design has been developed to enable a rapid adjustment of the length in order to speed up the operations of dressing before entering the clean room. The stopper is shaped into the band and avoids the use of additional components that may fall in the working area contaminating it.

QS



PATENT PENDING



NO ADDITIONAL COMPONENTS  
EASY HANDLING, EVEN WITH GLOVES  
STABILITY OF THE SLIDER  
TIGHTNESS OF THE ELASTIC HEADBAND  
SMOOTH REGULATION  
ANTISTATIC MATERIAL



# 611 POLYCARBONATE Lens

## VERSATILITY





### autoclave sterilization

**611.S0.00.00**

Frame: directly vented  
Lens: clear

**611.S1.00.00**

Frame: indirectly vented  
Lens: clear

**042.060**  
Spare lens

**601.OP00.99**  
RX insert

**611.S0.00.01**

Frame: directly vented  
Lens: clear AF<sup>121</sup>



**611.S1.00.01**

Frame: indirectly vented  
Lens: clear AF<sup>121</sup>



**042.120M**  
Spare lens

**601.OP00.99**  
RX insert



### STERILIZATION CYCLES



Goggles with polycarbonate lens reusable up to 40 autoclave sterilization cycles with steam at 121° C, 1 atm for 30 minutes.



The treatment AF<sup>121</sup> applied to the lens prevents at the same time from scratches and from fogging, bearing up to 10 steam sterilization cycles.

### TECHNICAL FEATURES

- Available with polycarbonate lenses or with Anti-Fog<sup>121</sup>/Antiscratch coating
- Available with directly or indirectly ventilation
- Elastic band in silicone with Quick&Smooth system
- RX Insert

### ELASTIC BAND QS



Pic.1 - Wear the goggles



Pic.2 - Set the length of the elastic band by gently pulling back the ends.



Pic.3 - To remove the goggles, loosen the elastic band by letting the cursors to slide forth

# 611 Byoxene® Lens

## INNOVATION







### $\beta$ and $\gamma$ ray sterilization

**611.S0.00.02**  
Frame: directly vented  
Lens: clear

**611.S1.00.02**  
Frame: indirectly vented  
Lens: clear

**042.118**  
Spare lens

**601.OP00.99**  
RX insert

### STERILIZATION CYCLES



Goggles with **Bioxene®** lenses keep the transparency unaltered up to 20 cycles of sterilization.

### TECHNICAL FEATURES

- **Bioxene®** Lenses
- Available with directly or indirectly ventilation
- Elastic band in anti-static silicone
- RX insert

### ANTI-STATIC ELASTIC BAND



Pic.1 - To extend the elastic band, loosen the loose end



Pic.2 - Set the adjustment by letting the loose end to slide forth



Pic.3 - To shorten the band, let the elastic to slide back



Pic.4 - Set the adjustment by letting slide back the loose end

# 619 POLYCARBONATE Lens

## OVER THE GLASSES





### autoclave sterilization

**619.05.23.10**  
Frame: directly vented  
Lens: clear

**619.04.23.10**  
Frame: indirectly vented  
Lens: clear

**042.085**  
Spare lens

### STERILIZATION CYCLES



Goggles with polycarbonate lens reusable up to 30 autoclave sterilization cycles with steam at 121° C, 1 atm for 30 minutes.

### TECHNICAL FEATURES

- Polycarbonate Lenses
- Available with directly or indirectly ventilation
- Elastic band in silicone with Quick&Smooth system
- Over the glasses

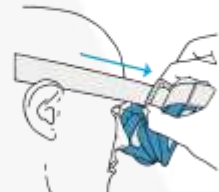
### ELASTIC BAND QS QS



Pic.1 - Wear the goggles



Pic.2 - Set the length of the elastic band by gently pulling back the ends



Pic.3 - To remove the goggles, loosen the elastic band by letting the cursors to slide forth



# VALIDATED TECHNOLOGY

## 611 POLYCARBONATE Lens

128 g

autoclave sterilization



Sterilization with STEAM 121°C for 30min in 1 ATM

LIFE CYCLE



REFERENCE PARAMETERS

Lens	VLT = 85.6%
Elastic Band	$\Delta l$ = 73.3%

VLT = visible light transmittance  
 $\Delta l$  = elongation%

Mask elements	Number of cycles		
	0÷20	20÷30	30÷40
Frame	No alteration	No alteration	No alteration
Lens	VLT = 82.6%	VLT = 82.3%	VLT = 81.4%
Elastic band	$\Delta l$ = 63.3%	$\Delta l$ = 61.2%	$\Delta l$ = 58.3%
Buckle	No alteration	No alteration	No alteration



Resistance to fogging of oculars  
EN166:2001 Clause 7.3.2

SAMPLE	TIME TO FOGGING [s]	'N' MARKING REQUIREMENT [s]
AF121	>30	>8

Resistance to surface damage by fine particles  
EN166:2001 Clause 7.3.1

SAMPLE	REDUCED LUMINANCE FACTOR [cd/lx·m <sup>2</sup> ]	'K' MARKING REQUIREMENT [cd/lx·m <sup>2</sup> ]
AF121	1.2	<5

## 611 $\beta$ yxoxene<sup>®</sup> Lens

128 g

$\beta$  and  $\gamma$  ray sterilization

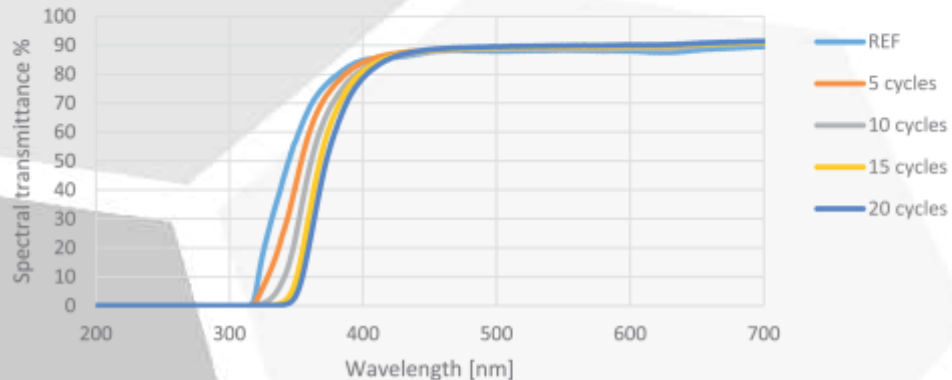


Visible light transmittance (VLT)  
 $\beta$ yxoxene<sup>®</sup> Lens

Reference	1 cycle	5 cycles	10 cycles	15 cycles	20 cycles
89.1%	88.9%	88.7%	89.1%	88.5%	88.3%
Variation	-0.2%	-0.4%	-0.4%	-0.6%	-0.8%

Visible light transmittance (VLT)  
POLYCARBONATE Lens

Reference	1 cycle	5 cycles	10 cycles	15 cycles	20 cycles
87.2%	85.6%	78.2%	73.1%	66.4%	63.6%
Variation	-1.8%	-10%	-16%	-24%	-27%



## 619 POLYCARBONATE Lens

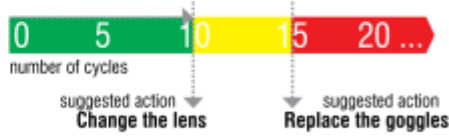
92 g

autoclave sterilization,  $\beta$  and  $\gamma$  ray sterilization



### GAMMA RAY radiation with 25 kGy

LIFE CYCLE



REFERENCE PARAMETERS

Lens	VLT = 87.4%
Elastic Band	$\Delta l$ = 60.0%

VLT = visible light transmittance  
 $\Delta l$  = elongation%

Mask elements	Number of cycles		
	0÷5	5÷10	10÷15
Frame	No alteration	No alteration	No alteration
Lens	VLT = 74.9% The lens becomes light yellow	VLT = 68.8% The lens becomes yellow	VLT = 62.8% The lens becomes yellow
Elastic band	$\Delta l$ = 40.0%	$\Delta l$ = 18.3%	$\Delta l$ = 13.3%
Buckle	No alteration	No alteration	No alteration



### BETA RAY radiation with 25 kGy

LIFE CYCLE



Mask elements	Number of cycles		
	0÷5	5÷10	10÷15
Frame	No alteration	No alteration	No alteration
Lens	VLT = 82.7% The lens becomes light yellow	VLT = 68.8% The lens becomes yellow	VLT = 65.9% The lens becomes yellow
Elastic band	$\Delta l$ = 46.6%	$\Delta l$ = 21.6%	$\Delta l$ = 16.6%
Buckle	No alteration	No alteration	No alteration



### Sterilization with STEAM 121°C for 30min in 1 ATM

LIFE CYCLE



Mask elements	Number of cycles		
	0÷5	5÷10	10÷15
Frame	No alteration	No alteration	No alteration
Lens	VLT = 86.2%	VLT = 85.8%	VLT = 84.3%
Elastic band	$\Delta l$ = 54.8%	$\Delta l$ = 50.2%	$\Delta l$ = 42.7%
Buckle	No alteration	No alteration	No alteration

**Purus**  
Cleanroom Solutions Ltd.

**PureTouch**  
The first step to something better

For Use Under Latex, Nitrile, PVC, and all Exam Gloves



**Glove Liners deliver a comfortable barrier that:**

- Reduces perspiration and wicks moisture during extended use
- Prevents skin irritation without diminishing tactile sensitivity
- Limits wear and tear to extend life of gloves and conserve resources

**Durability**

- Low-lint, 100% nylon composition, 15 denier
- Sturdy, launderable, and reusable
- Independent users have reported 10-15 washes

**Cleanliness**

- Automated manufacturing in a clean environment
- Pre-laundered; will not shrink
- Cleanroom packaging

**Custom Quality**

- Compatible with stringent cleanroom requirements
- Can be used effectively as a gowning glove
- 100% quality control inspection

**Specifications**

- Basic Weight: 21.5g/pair  $\pm$  10%
- Thickness: 2mm  $\pm$  10%
- Surface Resistivity:  $1 \times 10^9 \pm 10\%$  ohms/square

**Half Finger**

Size	MFG Part No.	Pairs/Bags/Case
Small	GLHF-S	20/15/300
Medium	GLHF-M	20/15/300
Large	GLHF-L	20/15/300
X-Large	GLHF-XL	20/15/300

**Full Finger**

Size	MFG Part No.	Pairs/Bags/Case
Small	GLFF-S	20/15/300
Medium	GLFF-M	20/15/300
Large	GLFF-L	20/15/300
X-Large	GLFF-XL	20/15/300





**Purus**  
Cleanroom Solutions Ltd.

**Pure image**<sup>™</sup>  
for critical cleanroom environments

**Pure image**<sup>™</sup>

The most advanced line of  
clean paper and documentation  
available for the most  
demanding applications.



**CLEAN  
image**  
NOTEBOOK



## Pureimage® Cleanroom Paper

For writing, printing and photocopying in cleanroom environments.

### Characteristics:

- Dual Binding Technology
- Suitable for use in Class 10 to Class 1000 (ISO class 4 to Class 6) cleanro
- Pure image Premier Paper produced in Class 10 (ISO 4) cleanroom.
- Excellent printability and heat toner adhesion.
- Double sided web cleaned prior to sheeting.
- High opacity and durability.

### Specifications:

	80 gsm / 22lb	105 gsm / 28 lb
Basis Weight (g/m <sup>2</sup> )	78 – 83	102 – 107
Caliper (micron)	94 – 104	110 – 120
Tear Strength MD/CD	74/75	80/81
Brightness (%)	88 – 92	88 – 92

### Purus Catalog Number

Size	Weight (*)	Color (**)	Poly Substrate	Latex Substrate	Packaging (***)
A4	80 gsm	Blue	PCIB 1083C	LCIB 2025C	250/10/2500, cs
A4	80 gsm	White	PCIW 1081C	LCIW 2014C	250/10/2500, cs
A4	80 gsm	Yellow	PCIY 1085C	LCIY 2016C	250/10/2500, cs
A4	80 gsm	Green	PCIG 1089C	LCIG 2017C	250/10/2500, cs

(\*) 105 gsm is also available in select sizes and colors

(\*\*) Pink, Cream, Orange and Purple are also available in Poly Substrate.

(\*\*\*) Packaging is formatted in Sheets per Ream / Reams per Case / Sheets per Case.

## CLEANimage Cleanroom Notebook

For writing in cleanroom environments.

### Characteristics:

- Cleanroom processed and packaged
- Amide and Silicone free
- Dual Binding Technology without any organic fillers
- Completely recyclable
- Custom printing available

### Specifications:

	80 gsm / 22 lb
Basis Weight (g/m <sup>2</sup> )	78 – 83
Caliper (micron)	94 – 104
Tear Strength MD/CD	74/75
Brightness (%)	88 – 92





## Purus Mats

Multi-layered, adhesive-coated mat that removes dirt and dust from foot traffic and wheels prior to their entry into a critical manufacturing environment.

### Characteristics:

- QC test data and reports available for each shipment or case.
- Low profile, numbered tabs.
- Available in 30 or 60 layers with four or eight mats/case.
- Consistent adhesive coverage ensures maximum performance of each layer.

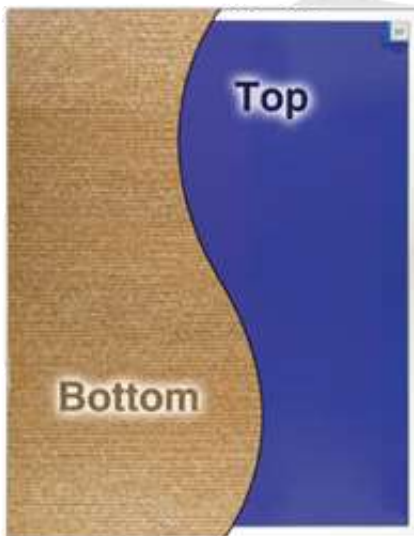
### Specifications:

	Regular Tack	High Tack
Film	Low density polyethylene	Low density polyethylene
Adhesive	Acrylic	Acrylic
Adhesive Thickness	0.3 mil. / 8 µm	0.3 mil. / 8 µm
Peel Adhesion "top"	6.5 oz. / 190g/25mm ± 40	9.25 oz. / 250g/25mm ± 40
Heat Resistance	158°F / 70° C – 48 Hours	158°F / 70° C – 48 Hours

Size	Color	Purus Catalog Number		
		30 Layer-4/cs	30 Layer-8/cs	60 Layer-4/cs
457x914	White	PM 1836 34 W	PS 1836 38 W	PS 1836 64 W
457x1143	White	PM 1845 34 W	PS 1845 38 W	PS 1845 64 W
610x914	White	PM 2436 34 W	PS 2436 38 W	PS 2436 64 W
660x1143	White	PM 2645 34 W	PS 2645 38 W	PS 2645 64 W
914x1143	White	PM 3645 34 W	PS 3645 38 W	PS 3645 64 W

Size	Color	Purus Catalog Number		
		30 Layer-4/cs	30 Layer-8/cs	60 Layer-4/cs
457x914	Blue	PM 1836 34 B	PS 1836 38 B	PS 1836 64 B
457x1143	Blue	PM 1845 34 B	PS 1845 38 B	PS 1845 64 B
610x914	Blue	PM 2436 34 B	PS 2436 38 B	PS 2436 64 B
660x1143	Blue	PM 2645 34 B	PS 2645 38 B	PS 2645 64 B
914x1143	Blue	PM 3645 34 B	PS 3645 38 B	PS 3645 64 B

(\* ) Contact your Sales Representative for complete list of sizes available (\*\* ) Grey and clear is also available in select sizes and configurations.



## Purus Mat Frame

Designed to be used with the Purus Mat to create a system that is easy to use in any critical area.

### Characteristics:

- Naturally antimicrobial, mold and mildew resistant
- Non-Slip made from Polymer Coated polyester textile
- Non-skid backing Reduces the risk of slips and falls
- Protect floors from adhesive residue from the Purus Mats

### Specifications

- Material : Polystyrene
- Thickness : 3.2mm
- Packaging : Each

Frame Size (mm)	For Mats (mm)	Catalog No. (white)
508x965	457x914	PF 2038 01 W 00
508x1194	457x1143	PF 2047 01 W 00
660x965	610x914	PF 2638 01 W 00
965x965	914x914	PF 3838 01 W 00
965x1194	914x1143	PF 3847 01 W 00
965x1575	914x1524	PF 3862 01 W 00

\*\* Mats are not included.



## Clino® CR trolley systems with impregnation of EasyMop GMP® and CR



### Process reliability with the EasyMop GMP and EasyMop CR system



Manufactured from stainless steel 316L in accordance with the guidelines of EHEDG



Available with swivel castors suitable for the cleanrooms; if required, the castors can be autoclaved or electrically conductive, with or without locking device



Hygienic design: Entirely enclosed finishing. Enclosed attachment point designed as blind-hole bushings

The system trolley for use in areas with stringent requirements such as areas under sterile conditions (GMP A/B) or ISO areas with high cleanliness requirements. Design, materials and processing meet the highest demands and are tested and certified by independent institutes.

### The characteristics:

- + **Validatable process** with maximum process reliability (as per EU-GMP-RL Annex 1, Sentence B2)
- + **Reproducible results** due to system-specific elimination of sources of errors
- + **Autoclavable\***, suitable for the use in areas under sterile conditions (as per ISO 14644-5, Sec. E.2.2. and EU-GMP-RL, Annex 1, Sentence B1)  
\* Does not apply to the EasyMop CR system box
- + **Entirely enclosed** and smooth finishing (as per ISO 14644-5, Annex E, Sec. E.2.1)
- + System box EasyMop GMP and Clino CR9 have the **TESTED DEVICE** certificate of Fraunhofer IPA
- + The Clino modular design enables **object-specific adjustments**
- + A practically **contactless workflow** with MopJump and MopDrop
- + **Self-explanatory work steps**, therefore **easy-to-learn**

Work procedure, see page 20 et seq.



1

A

0,2  
m<sup>2</sup>

## Clino® CR mini EM-GMP1

Impregnation system for 10 mops, for highly sensitive areas – minimal space requirements, including disposal

Art. No.: 3510170

Dimensions (LxWxH): 43 x 53 x 43 cm

### Basic components

- ⊕ Base frame mini
- ⊕ Stainless steel suitable for cleanrooms, high-end finish
- ⊕ Special castors (100 mm) can be autoclaved

### Work area

- ⊕ 1 system box EasyMop GMP
- ⊕ 1 9-litre stainless steel container for mop release

### Method of operation

- ⊕ Impregnation with the system box EasyMop GMP



Ergonomics: The small, compact CR mini cleaning unit was constructed in such a manner that it can be moved with the mop frame. No bending down is required.

Picture shows model, including optional extras



1

A

0,2  
m<sup>2</sup>

## Clino® CR mini EM-GMP2

Impregnation system for 20 mops, for highly sensitive areas – minimal space requirements

Art. No.: 3510160

Dimensions (LxWxH): 43 x 53 x 43 cm

### Basic components

- ⊕ Base frame mini
- ⊕ Stainless steel suitable for cleanrooms, high-end finish
- ⊕ Special castors (100 mm) can be autoclaved

### Work area

- ⊕ 2 system boxes EasyMop GMP

### Method of operation

- ⊕ Impregnation with the system box EasyMop GMP



Additional attachment of stainless steel container MopTen for mop release possible – Art. No.: 3510185



1

A

0,3  
m<sup>2</sup>

## Clino® CR1 EM-GMP

Impregnation system for highly sensitive areas – with disposal unit

Art. No.: 3510100

Dimensions (LxWxH): 61 x 53 x 70 cm

### Basic components

- ⊕ Small base frame
- ⊕ Stainless steel suitable for cleanrooms, high-end finish
- ⊕ Special castors (100 mm) can be autoclaved

### Work area

- ⊕ 2 system boxes EasyMop GMP

### Method of operation

- ⊕ Impregnation with the system box EasyMop GMP

### Disposal

- ⊕ 1 x 35-litre unit
- ⊕ 1 9-litre stainless steel container

Picture shows model, including optional extras



ClinoLink assembly variant 1: With mop handle holder and support for the mop frame.  
Picture shows model, including optional extras

- 1 Clino® CR4 EM-GMP
- A The high-end system trolley:  
The modular design system  
suitable for the cleanroom;  
for use in highly sensitive areas
- 0.4 m<sup>2</sup>

- ◊ Cleaning method:  
EasyMop GMP with a system box certified for areas under sterile conditions
- ◊ Highest efficiency and process reliability in the single-step process
- ◊ Made from stainless steel suitable for cleanrooms, all components can be autoclaved
- ◊ Individually configurable through Clino modular design system
- ◊ ClinoLink: Cleanroom-suitable connection system for individual attachment of accessory parts (see assembly variant for an example)



► pg. 89

Clino® CR4 EM-GMP  
Art. No.: 3540500

Dimensions (LxWxH): 61 x 63 x 102 cm  
Variable width, depending on assembly variant

### Standard equipment Clino CR4 EM-GMP Art. No.: 3540500

#### Basic components

- Medium base frame
- Stainless steel suitable for cleanrooms, high-end finish
- Tube size 22 mm
- Special castors (100 mm) can be autoclaved

#### Work area

- 2 system boxes EasyMop GMP
- 2 4-litre stainless steel containers

#### Supply unit

See ClinoLink Assembly variants 2, 3 and 4

#### Disposal

- 1 x 35-litre unit
- 9-litre stainless steel container

### Optional extras/accessories



ClinoLink  
Assembly variant 2:  
Contains 3 trays for  
various mops  
Art. No.: 3500088

► pg. 67, 89, 101



ClinoLink  
Assembly variant 3:  
Additional attachment of  
a 4-litre stainless steel  
container, e.g. for cloth  
release  
Art. No.: 3500094



ClinoLink  
Assembly variant 4:  
Additional attachment of  
a 9-litre stainless steel  
container (only possible  
for EasyMop method)  
Art. No.: 3530189



Clino stainless steel  
mop frame with  
one piece handle  
Art. No.: 3500092  
Additional mop frames

► pg. 125



MopDrop  
Contactless release of  
the mop with MopDrop  
Art. No.: 3500019

► pg. 36



Disposal bag  
1 x 35-litre, sterile, me-  
dium-sized, transparent  
Art. No.: 3580016

► pg. 37, 72





Picture shows model, including optional extras

1

## Clino® CR9 EM-GMP

The high-end solution for very large cleanrooms

A

0,5  
m²

- ◆ Cleaning method: EasyMop GMP with a system box certified for areas under sterile conditions
- ◆ Highest efficiency and process reliability in the single-step process
- ◆ Made from stainless steel suitable for cleanrooms, all components can be autoclaved
- ◆ Can be equipped for an up to 600 m² floor cleaning area
- ◆ Including 4-litre stainless steel container, swivel-mounted, for surface cleaning



Clino® CR9 EM-GMP  
Art. No.: 3570050

Dimensions (LxWxH): 83 x 53 x 98 cm

### Standard equipment Clino CR9 EM-GMP Art. No.: 3570050

#### Basic components

- Large base frame
- Stainless steel suitable for cleanrooms, high-end finish
- Tube size 22 mm

- Special castors (100 mm) can be autoclaved

#### Work area

- 4 system boxes EasyMop GMP
- 2 4-litre stainless steel containers

#### Disposal

- 1 x 70-litre unit

### Optional extras/accessories



Space-saving solution after the cleaning procedure: the CR9 system trolleys can be telescoped



Stainless steel Trapez mop frame for surface cleaning and disinfection, e.g. of WSP benches  
Art. No.: 2009580

► pp. 95, 99



MopDrop  
Contactless release of the mop with MopDrop  
Art. No.: 3500019

► pp. 36



They are optionally available with either autoclavable or electrically conductive special castors with or without locking devices

► pp. 99



Clino stainless steel mop frame with one-piece handle  
Art. No.: 3500902  
Additional mop frames

► pp. 94



Disposal bag  
1 x 70-litre sterile, large, transparent  
Art. No.: 3580017

► pp. 37, 70



Picture shows model, including optional extras

1

0,2  
m<sup>2</sup>

## Clino® CR mini EM-CR1

Impregnation system for 12 mops for use in non-sterile areas, minimal space requirements

Art. No.: 3510150

Dimensions (LxWxH): 43 x 52 x 45 cm

### Basic components

- ⊕ Base frame mini
- ⊕ Stainless steel suitable for cleanrooms, high-end finish
- ⊕ Electrically conductive special castors (100 mm)

### Work area

- ⊕ 1 system box EasyMop
  - ⊕ 1 tray for system boxes EasyMop
  - ⊕ System box is available in the following colours: ■ ■ ■ ■ ■ ■
- pp. 63

### Disposal

- ⊕ 1 system box EasyMop
- ⊕ Cleanroom-suitable 9-litre disposal bag available for delivery as an accessory ► pp. 37, 72



Picture shows model, including optional extras

1

0,3  
m<sup>2</sup>

## Clino® CR mini EM-CR2

Impregnation system for 24 mops for use in non-sterile areas, minimal space requirements, with disposal

Art. No.: 3510140

Dimensions (LxWxH): 57 x 53 x 45 cm

### Basic components

- ⊕ Base frame mini
- ⊕ Stainless steel suitable for cleanrooms, high-end finish
- ⊕ Electrically conductive special castors (100 mm)

### Work area

- ⊕ 2 system boxes EasyMop
  - ⊕ 1 tray for system boxes EasyMop
  - ⊕ System box is available in the following colours: ■ ■ ■ ■ ■ ■
- pp. 63

### Disposal

- ⊕ 1 stainless steel container MopTen
- ⊕ Cleanroom-suitable 9-litre disposal bag available for delivery as an accessory ► pp. 37, 72



Picture shows model, including optional extras

1

0,3  
m<sup>2</sup>

## Clino® CR1 EM-CR

The EasyMop CR system can be stored underneath the workbench

Art. No.: 3510200

Dimensions (LxWxH): 61 x 53 x 70 cm

### Basic components

- ⊕ Small base frame
- ⊕ Stainless steel suitable for cleanrooms, high-end finish
- ⊕ Electrically conductive special castors (100 mm)

### Work area

- ⊕ 2 system boxes EasyMop
  - ⊕ 1 tray for system boxes EasyMop
  - ⊕ System box is available in the following colours: ■ ■ ■ ■ ■ ■
- pp. 63

### Disposal

- ⊕ 1 x 35-litre unit
- ⊕ 1 9-litre stainless steel container
- ⊕ Cleanroom-suitable 35-litre disposal bag available for delivery as an accessory ► pp. 37, 72



ClinoLink assembly variant 1: With mop handle holder and support for the mop frame.  
Picture shows model, including optional extras

1

## Clino® CR4 EM-CR

The high-end system trolley:

0,4  
m<sup>2</sup>

The cleanroom-suitable modular design system for highly sensitive areas that do not require sterility

- ❖ Cleaning method: EasyMop CR with ergonomically optimised system box
- ❖ Highest efficiency and process reliability in the single-step process
- ❖ Wiper impregnation for surface cleaning in the PlusBox
- ❖ Made of cleanroom-suitable stainless steel, base frame and electrically conductive castors
- ❖ Individually configurable through Clino modular design system
- ❖ ClinoLink: Cleanroom-suitable connection system for individual attachment of accessory parts (see assembly variant for an example)

► pg. 69

Clino® CR4 EM-CR  
Art. No.: 3540600

Dimensions (LxWxH):

61 x 63 x 102 cm

Variable width, depending on assembly variant

### Standard equipment Clino CR4 EM-CR Art. No.: 3540600

#### Basic components

- Medium base frame
- Stainless steel suitable for cleanrooms, high-end finish
- Electrically conductive special castors (100 mm)

#### Work area

- 2 system boxes EasyMop CR
- 2 PlusBoxes
- 1 tray for system boxes EasyMop

#### Supply unit

See ClinoLink assembly variants 2, 3 and 4

#### Disposal

- 1 x 35-litre unit
- 5-litre plastic container

### Optional extras/accessories



**ClinoLink  
Assembly variant 2:**  
Contains 3 trays for various mops  
Art. No.: 3500088  
► pg. 69, 68, 70



**ClinoLink  
Assembly variant 3:**  
Additional attachment of a Clino PlusBox, e.g. for cloth release  
Art. No.: 3500095



Are available with either autoclavable or electrically conductive special castors  
► pg. 70



**ClinoLink  
Assembly variant 4:**  
Additional attachment of a 5-litre plastic container (only possible for EasyMop method)  
Art. No.: 3530188  
► pg. 69



**MopDrop**  
Contactless release of the mop with MopDrop  
Art. No.: 3500019  
► pg. 36



**Disposal bag**  
1 x 35-litre, sterile, medium-sized, transparent  
Art. No.: 3580016  
► pg. 37, 72



## Clino® CR trolley systems with MopFloat® GMP and CR



### MopFloat GMP: The open system with the safety of an enclosed system



Manufactured from  
stainless steel 1.4404  
in accordance with the  
guidelines of EHEDG



Available with swivel  
castors suitable for the  
cleanroom; if required,  
the castors can be  
autoclaved or electrically  
conductive, with or  
without locking device



**Reproducibility:**  
Precise amount of  
solution per dosing  
process

In case you don't intend to use a box system, MopFloat GMP offers the "open" alternative: Through the use of mechanical intelligence, it is ensured that – independent of the user – the same reliable result is always attained in the mop impregnation process. From the beginning, MopFloat GMP offers maximum safety while providing full flexibility for the requirements of highly critical areas under consideration of the pertinent regulations and guidelines.

### The characteristics:

- +** **Validatable process** with maximum process reliability (as per EU-GMP-RL Annex 1, Sentence 82)
- +** **Inbuilt safety:** Unintentional misuse impossible
- +** **Reproducibility:** Impregnation of the textiles is independent of operator
- +** **Autoclavable:** suitable for the use in areas under sterile conditions (as per ISO 14644-5, Sec. E.2.2. and EU-GMP-RL, Annex 1, Sentence 81)
- +** **GMP conformity:** Manufactured entirely from stainless steel; the only swivel is located in an FDA-conform plain bearing bush
- +** **Hygienic design:** No hard-to-reach places or dead areas; MopFloat can be folded
- +** **Ergonomics and easy to learn:** Self-explanatory system, can be operated with a low amount of required physical effort
- +** **Avoidance of cross-contamination:** The entire work procedure is practically contactless through MopJump and MopDrop

Work procedure, see page 26

Technical changes reserved



Picture shows model, including optional extras

1

A

0,3  
m<sup>2</sup>

## Clino® CR mini MF-GMP

For highly sensitive areas; minimal space requirements

**Art. No.:** 3510180

Dimensions (LxWxH): 57 x 56 x 49 cm

### Basic components

- ⊕ Base frame mini
- ⊕ Stainless steel suitable for cleanrooms, high-end finish
- ⊕ Special castors (100 mm) can be autoclaved

### Work area

- ⊕ MopFloat GMP
- ⊕ 25-litre stainless steel container

### Supply unit

- ⊕ stainless steel container MopTen



Also available as a stainless steel/plastic version  
Clino® CR mini MF-CR  
**Art. No.:** 3510190



Picture shows model, including optional extras

1

A

0,4  
m<sup>2</sup>

## Clino® CR1 MF-GMP

For highly sensitive areas; low space requirements, includes disposal

**Art. No.:** 3510050

Dimensions (LxWxH): 74 x 57 x 71 cm

### Basic components

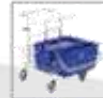
- ⊕ Small base frame
- ⊕ Stainless steel suitable for cleanrooms, high-end finish
- ⊕ Special castors (100 mm) can be autoclaved

### Work area

- ⊕ MopFloat GMP
- ⊕ 25-litre stainless steel container
- ⊕ stainless steel container MopTen

### Disposal

- ⊕ 1 x 35-litre unit
- ⊕ 9-litre stainless steel container



Also available as a stainless steel/plastic version  
Clino® CR1 MF-CR  
**Art. No.:** 3510060



Picture shows model, including optional extras

1

A

0,8  
m<sup>2</sup>

## Clino® CR5 MF-GMP

The system trolley with maximum transport capacity – add-on parts in the front and back for storage can be folded in

**Art. No.:** 3570020

Rest dimensions (LxWxH): 85 x 52 x 130 cm

Working dimensions (LxWxH): 146 x 52 x 101 cm

### Basic components

- ⊕ Large base frame
- ⊕ Stainless steel
- ⊕ Special castors (100 mm) can be autoclaved

### Work area

- ⊕ MopFloat GMP
- ⊕ 25-litre stainless steel container
- ⊕ stainless steel container MopTen

### Supply unit

- ⊕ 3 stainless steel trays
- ⊕ 3 4-litre stainless steel containers

### Disposal

- ⊕ 2 x 70-litre unit



ClinoLink assembly variant 1: With mop handle holder and support for the mop frame.  
Picture shows model, including optional extras

1

## Clino® CR4 MF-GMP

The high-end system trolley:  
The modular design system  
suitable for the cleanroom;  
for use in highly sensitive areas

A

- Cleaning method:  
Results can be validated through the innovative MopFloat method
- Highest efficiency and process reliability in the single-step process
- Made from stainless steel suitable for cleanrooms, all components can be autoclaved
- Individually configurable through Clino modular design system
- ClinoLink: Cleanroom-suitable connection system for individual attachment of accessory parts (see assembly variant for an example)

▶ pp. 69

Clino® CR4 MF-GMP  
Art. No.: 3540300

Dimensions (LxWxH):  
75 x 63 x 102 cm

Variable width, depending on assembly variant

### Standard equipment Clino CR4 MF-GMP

Art. No.: 3540300

#### Basic components

- Base frame
- Stainless steel suitable for cleanrooms, high-end finish
- Special castors (100 mm) can be autoclaved

#### Work area

- MopFloat GMP
- 1 25-litre stainless steel container for the cleaning and disinfection fleet

- 1 stainless steel container MopTen for fresh mops

#### Supply unit

See ClinoLink assembly variants 2 and 3

#### Disposal

- 1 x 35-litre unit
- 9-litre stainless steel container

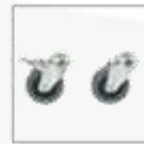
### Optional extras/accessories



ClinoLink  
Assembly variant 2:  
Contains 3 trays for  
various mop frames  
Art. No.: 3500088  
▶ pp. 62, 69, 101



ClinoLink  
Assembly variant 3:  
Additional attachment of a  
4-litre stainless steel con-  
tainer, e.g., for disposal of  
decontaminated wipers  
Art. No.: 3500094



Autoclavable  
special castors  
with and without locking  
device  
Art. No.: 3500100 (without)  
Art. No.: 3500150 (with)  
▶ p. 70



MopJump  
Contactless and easy  
mop attachment  
Art. No.: 3500020  
▶ pp. 62



MopDrop  
Contactless release of  
the mop with MopDrop  
Art. No.: 3500019  
▶ pp. 36



Disposal bag  
1 x 35-litre, sterile, me-  
dium-sized, transparent  
Art. No.: 3580016  
▶ pp. 37, 72





ClinoLink assembly variant 1: With mop handle holder and support for the mop frame.  
Picture shows model, including optional extras

1

## Clino® CR4 MF-CR

The high-end system trolley:

The cleanroom-suitable modular design system for highly sensitive areas that do not require sterility

0,5  
m²

- ◊ Cleaning method:  
Results can be validated through the innovative MopFloat method
- ◊ Highest efficiency and process reliability in the single-step process
- ◊ Made from cleanroom-suitable stainless steel, base frame and electrically conductive castors
- ◊ Individually configurable through Clino modular design system
- ◊ ClinoLink: Cleanroom-suitable connection system for individual attachment of accessory parts (see assembly variant for an example)

► pp. 69

Clino® CR4 MF-CR  
Art. No.: 3540400

Dimensions (LxWxH):  
78 x 63 x 104 cm

Variable width, depending on assembly variant

### Standard equipment Clino CR4 MF-CR Art. No.: 3540400

#### Basic components

- Base frame
- Stainless steel suitable for cleanrooms, high-end finish
- Tube size 22 mm
- Special castors (100 mm), electrically conductive

#### Work area

- MopFloat CR
- 1 25-litre bucket
- 1 15-litre bucket
- 2 PlusBoxes

#### Supply unit

See ClinoLink assembly variants 2 and 3

#### Disposal

- 1 x 35-litre unit
- 5-litre plastic container

### Optional extras/accessories



**ClinoLink  
Assembly variant 2:**  
Contains 3 trays for various mop frames  
Art. No.: 3500088

► pp. 62, 66, 104



**ClinoLink  
Assembly variant 3:**  
Additional attachment of a PlusBox, e.g. for wiper release  
Art. No.: 3500095



**Trapez mop frame  
for surface cleaning**  
Art. No.: 2520300

► pp. 85, 99



**MopJump**  
Contactless and easy mop attachment  
Art. No.: 3500020

► pp. 62



**MopDrop**  
Contactless release of the mop with MopDrop  
Art. No.: 3500019

► pp. 38



**Disposal bag**  
1 x 35-litre, sterile, medium-sized, transparent  
Art. No.: 3580016

► pp. 37, 72

## Clino® CR trolley systems with flat wringer Ringo® GMP



The Clino CR3 system trolley with the flat wringer Ringo GMP was certified by Fraunhofer IPA in 1999. It was the first ever cleaning and disinfection system certified for cleanrooms. Its open design enables the use of single or two-step cleaning techniques and therefore makes it an ideal tool for primary or intermediate cleaning. However, the design, selection of materials and processing reflect the highest requirements, so that the use even in areas under sterile conditions (GMP A/B) is not a problem.

\* Does not apply to Clino CR6

### The characteristics:

- + **Open design** for the use of various cleaning methods
- + **Full flexibility** with changing requirements
- + **Security** through independent assessment (Clino CR3)
- + **Autoclavable\***, suitable for the use in areas under sterile conditions (as per ISO 14644-5, Sec. E.2.2. and EU-GMP-RL, Annex 1, Sentence 81)
- + **The Clino modular design** enables **object-specific adjustments**
- + **A practically contactless workflow** with MopJump and MopDrop

\* Does not apply to Clino CR6

Work procedure, see page 29

Full flexibility with Clino CR –  
the first certified cleaning system  
for cleanroom use



Manufactured from stainless steel 316L in accordance with the guidelines of EHEDG



Available with swivel castors suitable for the cleanroom; if required, the castors can be autoclaved or electrically conductive, with or without locking device



All trolleys shown here are also available with the stainless steel Clino flat wringer  
▶ [pg. 26](#)



Picture shows model, including optional extras

1/2

A

0,4  
m<sup>2</sup>

## Clino® CR1 FP-GMP

For highly sensitive areas, minimal space requirements, with disposal

**Art. No.:** 3511000

Dimensions (LxWxH): 74 x 53 x 70 cm

### Basic components

- ◆ Small base frame, high-end finish
- ◆ Special castors (100 mm) can be autoclaved

### Work area

- ◆ Flat wringer Ringo GMP
- ◆ 25-litre stainless steel container
- ◆ stainless steel container MopTen

### Disposal

- ◆ 1 x 35-litre unit
- ◆ 9-litre stainless steel container



Also available as a stainless steel/plastic version  
**Clino® CR1 FP-CR**  
**Art. No.:** 3511500

### The most-liked accessories for the Clino CR1 FP-GMP

- ◆ Stainless steel mop frame (see pg. 94)
- ◆ MopJump (see pg. 66)
- ◆ MopDrop (see pg. 36)
- ◆ Electrically conductive castors (see pg. 70)
- ◆ 1 x 35-litre sterile disposal bag (see pp. 37, 72)



Picture shows model, including optional extras

1/2

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0,8  
m<sup>2</sup>

## Clino® CR5 FP-GMP

The system trolley with maximum transport capacity – add-on parts in the front and back for storage can be folded in

**Art. No.:** 3570000

Rest dimensions (LxWxH): 85 x 52 x 130 cm 0,4

Working dimensions (LxWxH): 146 x 52 x 101 cm

### Basic components

- ◆ Large base frame
- ◆ Stainless steel
- ◆ Special castors (100 mm) can be autoclaved

### Supply unit

- ◆ 3 stainless steel trays
- ◆ 3 4-litre stainless steel containers

### Disposal

- ◆ 2 x 70-litre unit

### Work area

- ◆ Flat wringer Ringo GMP
- ◆ 25-litre stainless steel container
- ◆ stainless steel container MopTen

### The most-liked accessories for the Clino CR5 FP-GMP

- ◆ Stainless steel mop frame (see pg. 94)
- ◆ MopJump (see pg. 66)
- ◆ Electrically conductive castors (see pg. 70)
- ◆ 1x 70-litre sterile disposal bag (see pp. 37, 72)
- ◆ Trapez stainless steel mop frame (see pp. 95, 99)





ClinoLink assembly variant 1: With mop handle holder and support for the mop frame.  
Picture shows model, including optional extras

1/2

## Clino® CR4 FP-GMP

The high-end system trolley:  
The modular design system  
suitable for the cleanroom;  
for use in highly sensitive areas

A

0,5  
m<sup>2</sup>

- ⊕ Cleaning method:  
certified flat wringer Ringo GMP for  
areas under sterile conditions
- ⊕ Full flexibility in single- and two-step  
technique
- ⊕ Made from stainless steel suitable for  
cleanrooms, all components can be  
autoclaved
- ⊕ Individually configurable through  
Clino modular design system
- ⊕ ClinoLink: Cleanroom-suitable  
connection system for individual  
attachment of accessory parts  
(see assembly variant for an example)

► pg. 69

Clino® CR4 FP-GMP  
Art. No.: 3540100

Dimensions (LxWxH):  
74 x 72 x 102 cm

Variable width, depending on assembly variant

### Standard equipment Clino CR4 FP-GMP Art. No.: 3540100

#### Basic components

- Base frame
- Stainless steel suitable for cleanrooms, high-end finish
- Tube size 22 mm
- Special castors (100 mm)  
can be autoclaved

#### Work area

- Flat wringer Ringo GMP
- 1 25-litre stainless steel container for the cleaning and disinfection fleet

- stainless steel container MopTen for fresh mops

#### Supply unit

See ClinoLink assembly variants 2 and 3

#### Disposal

- 1 x 35-litre unit
- 9-litre stainless steel container

### Optional extras/accessories



ClinoLink  
Assembly variant 2:  
Contains 3 trays for  
various mop frames  
Art. No.: 3500088  
► pg. 62, 69, 101



ClinoLink Assembly  
variant 3: Additional  
attachment of a 4-litre  
stainless steel container,  
e.g. for wiper release  
Art. No.: 3500094  
► pg. 69



Are available with  
either autoclavable or  
electrically conductive  
special castors  
► pg. 70



Trapez mop frame  
stainless steel  
for surface cleaning and  
disinfection  
Art. No.: 2009580  
► pg. 69, 101



MopDrop  
Contactless release of  
the mop with MopDrop  
Art. No.: 3500019  
► pg. 36



Disposal bag  
1 x 35-litre, sterile, me-  
dium-sized, transparent  
Art. No.: 3580016  
► pg. 37, 72



ClinoLink assembly variant 1: With mop handle holder and support for the mop frame.  
Picture shows model, including optional extras

1/2

## Clino® CR4 FP-CR

The high-end system trolley:

0.5  
m<sup>2</sup>

The cleanroom-suitable modular design system for highly sensitive areas without sterility requirements

- ⊕ Cleaning method:  
Flat wringer Ringo GMP
- ⊕ Full flexibility in single- and two-step technique
- ⊕ Wiper impregnation for surface cleaning in the PlusBox
- ⊕ Made of cleanroom-suitable stainless steel, base frame and electrically conductive swivel castors
- ⊕ Individually configurable through Clino modular design system
- ⊕ ClinoLink: Cleanroom-suitable connection system for individual attachment of accessory parts (see assembly variant for an example)

► pg. 69

Clino® CR4 FP-CR  
Art. No.: 3540200

Dimensions (LxWxH):  
77 x 70 x 104 cm

Variable width, depending on assembly variant.

### Standard equipment Clino CR4 FP-CR Art. No.: 3540200

#### Basic components

- Base frame
- Stainless steel suitable for cleanrooms, high-end finish
- Tube size 22 mm
- Electrically conductive special castors (100 mm)

#### Work area

- Flat wringer Ringo GMP
- 2 PlusBoxes
- 1 25-litre bucket

- 1 15-litre bucket for fresh mops

#### Supply unit

See ClinoLink assembly variants 2 and 3

#### Disposal

- 1 x 35-litre unit
- 5-litre plastic container

### Optional extras/accessories



**ClinoLink Assembly variant 2:**  
Contains 3 trays for various mop frames  
Art. No.: 3500088

► pp. 62, 69, 70



**ClinoLink Assembly variant 3:**  
Additional attachment of a PlusBox, e.g. for wiper release  
Art. No.: 3500095



Are available with either autoclavable or electrically conductive special castors

► pg. 70



**Trapez mop frame**  
for surface cleaning  
Art. No.: 2520300

► pp. 69, 70



All Clino PlusBoxes can be equipped with the 4- to 6-litre mini disposal bag

► pp. 37, 72



**Disposal bag**  
1 x 35-litre, sterile, medium-sized, transparent  
Art. No.: 3580016

► pp. 37, 72



Picture shows model, including optional extras

1/2

## Clino® CR3 FP-GMP

The tried-and-tested all-round solution

A

0,5 m<sup>2</sup>



- Cleaning method: Flat wringer Ringo GMP
- Full flexibility in single- and two-step technique
- Certified for sterile areas GMP A/B
- Made from stainless steel suitable for cleanrooms, all components can be autoclaved

Clino® CR3 FP-GMP  
Art. No.: 3530010

Dimensions (LxWxH):  
86 x 53 x 109 cm

### Standard equipment Clino CR3 FP-GMP Art. No.: 3530010

#### Basic components

- Large base frame
- Stainless steel suitable for cleanrooms, high-end finish
- Special castors (100 mm) can be autoclaved

#### Work area

- Flat wringer Ringo GMP
- 2 25-litre stainless steel containers

#### Supply unit

- 9-litre stainless steel container, top for fresh mops

#### Disposal

- 9-litre stainless steel container, bottom for contaminated mops

### Optional extras/accessories



Clino stainless steel mop frame with one-piece handle  
Art. No.: 3500902  
Additional mop frames  
► pp. 34



Optionally available with either autoclavable or electrically conductive special castors with or without locking devices  
► pp. 70



MopJump  
Contactless and easy mop attachment  
Art. No.: 3500020  
► pp. 86



The mop frame's handle can be affixed to the permanently attached carrier



All mop frames are available with the Clino Connect replacement mount for fast and easy handle replacement  
► pp. 34, 84



Disposal bag  
1 x 9-litre, sterile, small, transparent  
Art. No.: 3580015  
► pp. 37, 72





1/2

A

0,4  
m<sup>2</sup>

## Clino® CR6 FP

3-bucket system with four buckets for surface cleaning and supply articles

Art. No.: 3550100

Dimensions (LxWxH): 80 x 54 x 102 cm

### Basic components

- ◆ Large base frame
- ◆ Stainless steel
- ◆ Tube size 22 mm
- ◆ Special castors (100 mm) can be autoclaved

### Work area

- ◆ Flat wringer Clino stainless steel with defined pressure point for uniform residual moisture
- ◆ 3 15-litre buckets with straight stainless steel handle

### Supply unit

- ◆ 4 6-litre buckets with straight stainless steel handle



1/2

A

0,4  
m<sup>2</sup>

## Clino® CR6s FP

2-bucket system trolley with additional storage space on top

Art. No.: 3550200

Dimensions (LxWxH): 67 x 54 x 102 cm

### Basic components

- ◆ Medium base frame
- ◆ Stainless steel
- ◆ Tube size 22 mm
- ◆ Special castors (100 mm) can be autoclaved

### Work area

- ◆ Flat wringer Clino stainless steel with defined pressure point for uniform residual moisture
- ◆ 2 15-litre buckets with straight stainless steel handle

### Supply unit

- ◆ 4 6-litre buckets with straight stainless steel handle



1/2

A

0,3  
m<sup>2</sup>

## Clino® CR6xs FP

Double rolling bucket system with minimal space requirements

Art. No.: 3550300

Dimensions (LxWxH): 51 x 54 x 101 cm

### Basic components

- ◆ Medium base frame
- ◆ Stainless steel
- ◆ Tube size 22 mm
- ◆ Special castors (100 mm) can be autoclaved

### Work area

- ◆ Flat wringer Clino stainless steel with defined pressure point for uniform residual moisture
- ◆ 2 15-litre buckets with straight stainless steel handle

## Clino® Trolley systems for grey areas



In controlled and grey areas there are no regulated requirements such as in the classified cleanrooms, but, even so, all types of contamination must be avoided or removed from the area. Therefore, the Clino system trolleys for controlled areas make professional cleaning technology available, however without leading to unnecessary costs. On the contrary – through their origin in professional building cleaning, they are consistently designed to efficient work procedures and, as a result, save both time and money. The possible cleaning methods are the same as for the cleanroom system trolleys – only implemented as a lower-priced solution.

### The characteristics:

- + **Stainless steel modular design system** for the object-specific adjustment
- + **All cleaning methods** are available
- + **Almost any type of special construction** is possible
- + **Changing the cleaning system without using any tools** can be completed quickly
- + **MultiBox drawer system** for maximal storage space and enclosed appearance
- + **Hygienic zone concept** attainable by using five colours of plastic components

The Clino stainless steel modular design system: Professional solutions for controlled areas



Plug-in connections,  
no screws required



Double-bearing mounted  
125 mm swivel castors  
with panel



22 mm stainless steel  
tube



1

0,4  
m<sup>2</sup>

## Clino® STEC20

The compact system trolley for sensitive areas

Art. No.: 3202000

Dimensions (LxWxH): 68 x 62 x 115 cm

### Basic components

- Medium base frame
- Stainless steel
- Double-bearing mounted 125 mm swivel castors

### Work area

- 1 MultiBox with 4 PlusBoxes for impregnation of mops and cloths
- ClinoBar bottle holder

### Supply unit

- 1 MultiBox

### Disposal

- 1 MultiBox

Picture shows model, including optional extras



1

0,7  
m<sup>2</sup>

## Clino® STEC20 with disposal unit

The compact system trolley for sensitive areas with removable disposal unit

Art. No.: 3205000

Dimensions (LxWxH): 117 x 62 x 115 cm

### Basic components

- Medium base frame
- Stainless steel
- Double-bearing mounted 125 mm swivel castors

### Work area

- 1 MultiBox with 4 PlusBoxes for impregnation of mops and cloths
- ClinoBar bottle holder

### Supply unit

- 2 MultiBoxes

### Disposal

- 1 removable unit



The STEC20 is also available with the system box EasyMop and in different colours.  
Art. No. of this version: 3204000

Picture shows model, including optional extras



1/2

0,3  
m<sup>2</sup>

## Clino® E1e

The smallest possible cleaning trolley with stainless steel flat wringer

Art. No.: 2020400

Dimensions (LxWxH): 62 x 57 x 86 cm

### Basic components

- Small base frame
- Stainless steel
- Double-bearing mounted 125 mm swivel castors

### Work area

- Flat wringer Clino stainless steel
- 1 25-litre bucket
- 1 15-litre bucket





## Clino® E1 MF

The smallest possible cleaning trolley with the innovative MopFloat system

**Art. No.:** 2020900

Dimensions (LxWxH): 62 x 57 x 86 cm

### Basic components

- ◆ Small base frame
- ◆ Stainless steel
- ◆ Double-bearing mounted 75 mm swivel castors

### Work area

- ◆ MopFloat CR
- ◆ 1 25-litre bucket
- ◆ 1 15-litre bucket



## Clino® Profi C5e

The medium-sized cleaning trolley with stainless steel flat wringer and three buckets for surface cleaning

**Art. No.:** 2095520

Rest dimensions (LxWxH): 78 x 58 x 110 cm 0,4 m<sup>2</sup>

Working dimensions (LxWxH): 100 x 58 x 110 cm

### Basic components

- ◆ Medium base frame
- ◆ Stainless steel
- ◆ Double-bearing mounted 125 mm swivel castors

### Work area

- ◆ Flat wringer Clino stainless steel
- ◆ 1 25-litre bucket
- ◆ 1 15-litre bucket
- ◆ 3 6-litre bucket

### Disposal

- ◆ 2 x 70-litre unit



## Clino® Profi C5 MF

The medium-sized cleaning trolley with the innovative MopFloat system

**Art. No.:** 2095900

Rest dimensions (LxWxH): 78 x 59 x 110 cm 0,4 m<sup>2</sup>

Working dimensions (LxWxH): 100 x 59 x 110 cm

### Basic components

- ◆ Medium base frame
- ◆ Stainless steel
- ◆ Double-bearing mounted 125 mm swivel castors

### Work area

- ◆ MopFloat CR
- ◆ 1 25-litre bucket
- ◆ 1 15-litre bucket
- ◆ 3 6-litre bucket

### Disposal

- ◆ 2 x 70-litre unit



1

0,7  
m<sup>2</sup>

## Clino® Profi C9

The large stainless steel system trolley for the EasyMop process

Art. No.: 2099980

Rest dimensions (LxWxH): 90 x 57 x 133 cm 

Working dimensions (LxWxH): 119 x 57 x 107 cm

### Basic components

- ⊕ Large base frame
- ⊕ Stainless steel
- ⊕ Tube size 22 mm
- ⊕ Double-bearing mounted 125 mm swivel castors

### Work area

- ⊕ 1 tray for system boxes EasyMop
- ⊕ 2 system boxes EasyMop

### Supply unit

- ⊕ 3 trays
- ⊕ 3 6-litre buckets

### Disposal

- ⊕ 2 x 70-litre unit

Picture shows model, including optional extras



1/2

0,8  
m<sup>2</sup>

## Clino® Profi C7e

The large cleaning trolley with stainless steel flat wringer

Art. No.: 2097575

Rest dimensions (LxWxH): 90 x 57 x 133 cm 

Working dimensions (LxWxH): 131 x 57 x 107 cm

### Basic components

- ⊕ Large base frame
- ⊕ Stainless steel
- ⊕ Tube size 22 mm
- ⊕ Double-bearing mounted 125 mm swivel castors

### Work area

- ⊕ Flat wringer Clino stainless steel
- ⊕ 1 25-litre bucket
- ⊕ 1 15-litre bucket

### Supply unit

- ⊕ 3 trays
- ⊕ 3 6-litre buckets

### Disposal

- ⊕ 2 x 70-litre unit

Picture shows model, including optional extras



1

0,8  
m<sup>2</sup>

## Clino® Profi C7 MF

The large cleaning trolley with the innovative MopFloat system

Art. No.: 2097900

Rest dimensions (LxWxH): 90 x 58 x 133 cm 

Working dimensions (LxWxH): 131 x 58 x 107 cm

### Basic components

- ⊕ Large base frame
- ⊕ Stainless steel
- ⊕ Tube size 22 mm
- ⊕ Double-bearing mounted 125 mm swivel castors

### Work area

- ⊕ MopFloat CR
- ⊕ 1 25-litre bucket
- ⊕ 1 15-litre bucket

### Supply unit

- ⊕ 3 trays
- ⊕ 3 6-litre buckets

### Disposal

- ⊕ 2 x 70-litre unit



Picture shows model, including optional extras

1/2

1  
m<sup>2</sup>

## Clino® STEC7

The ergonomically optimised system trolley for controlled areas.

Enclosed appearance, open function with the Clino MultiBox

Art. No.: 3077670

Rest dimensions (LxWxH): 107 x 61 x 115 cm 

Working dimensions (LxWxH): 155 x 61 x 115 cm

### Basic components

- ◆ Large base frame
- ◆ Stainless steel
- ◆ Tube size 22 mm
- ◆ Double-bearing mounted 125 mm swivel castors

### Work area

- ◆ Flat wringer Ringo
- ◆ 1 25-litre bucket, 1 15-litre bucket
- ◆ ClinoBar bottle holder

### Supply unit

- ◆ 3 MultiBoxes
- ◆ 4 PlusBoxes

### Disposal

- ◆ 2 x 70-litre unit



Picture shows model, including optional extras

1

1  
m<sup>2</sup>

## Clino® STEC7 MF

The ergonomically optimised system trolley for controlled areas.

Enclosed appearance, open function with the Clino MultiBox

Art. No.: 3077470

Rest dimensions (LxWxH): 107 x 61 x 115 cm 

Working dimensions (LxWxH): 155 x 61 x 115 cm

### Basic components

- ◆ Large base frame
- ◆ Stainless steel
- ◆ Tube size 22 mm
- ◆ Double-bearing mounted 125 mm swivel castors

### Work area

- ◆ MopFloat CR
- ◆ 1 25-litre bucket, 1 15-litre bucket
- ◆ ClinoBar bottle holder

### Supply unit

- ◆ 3 MultiBoxes
- ◆ 4 PlusBoxes

### Disposal

- ◆ 2 x 70-litre unit



Picture shows model, including optional extras

1

0,9  
m<sup>2</sup>

## Clino® STEC9K

The ergonomically optimised system trolley for controlled areas.

Enclosed appearance, open function with the Clino MultiBox

Art. No.: 3079740

Rest dimensions (LxWxH): 98 x 61 x 115 cm 

Working dimensions (LxWxH): 142 x 61 x 115 cm

### Basic components

- ◆ Large base frame
- ◆ Stainless steel
- ◆ Tube size 22 mm
- ◆ Double-bearing mounted 125 mm swivel castors

### Work area

- ◆ 1 tray for system boxes EasyMop
- ◆ 3 system boxes EasyMop
- ◆ ClinoBar bottle holder

### Supply unit

- ◆ 3 MultiBoxes
- ◆ 4 PlusBoxes for cloth impregnation

### Disposal

- ◆ 2 x 70-litre unit



## PPS® components for cleanroom system trolleys

Due to its standardised dimensions, the Clino modular design system enables the trouble-free exchange of individual components. Using the example of the CR4 model, here we'll show you a selection of possible variants that are all based on identical base frames:



Clino CR4 FP with accessories  
(assembly variants 1 and 3) ► [pg. 52](#)



Clino CR4 FP-GMP with accessories  
(assembly variants 1 and 2) ► [pg. 52](#)



Clino CR4 MF-GMP with accessories  
(assembly variants 1 and 3) ► [pg. 48](#)



Clino CR4 EM-GMP with accessories  
(assembly variants 1, 2 and 4) ► [pg. 48](#)



Clino CR4 EM-CR with accessories  
(assembly variants 1 and 2) ► [pg. 48](#)  
Zone concept **blue**



Clino CR4 EM-CR with accessories  
(assembly variants 1 and 3) ► [pg. 32](#)  
Zone concept **grey/charcoal-grey**



Clino CR4 EM-CR with accessories  
(assembly variants 1 and 3) ► [pg. 32](#)  
Zone concept **yellow**



Clino CR4 EM-CR with accessories  
(assembly variant 1) ► [pg. 32](#)  
Zone concept **green**



Clino CR4 EM-CR with accessories  
(assembly variants 1 and 3) ► [pg. 32](#)  
Zone concept **red**



The components and colours can be freely combined. Let us help you design your own system trolley design concept.

## Work area

Article No.	Description	Colour	Suitable for system trolley
	 		
	<b>System box EasyMop GMP</b> Certified for sterile areas GMP A/B. Can be validated and autoclaved, safe to use. With scaling 1, 2, 2,5 and 4 litres		
3500200	System box EasyMop GMP with lid	Stainless steel	Cleaning trolley with impregnation
3500210	MopJump for System box EasyMop GMP and MopTen		<a href="#">pp. 20, 40</a>
3500220	Triple seal		
	<b>System box EasyMop CR</b> The solution for impregnation in cleanrooms without sterility requirements. Different colours, e.g. for designing your own individual zone concept <a href="#">pp. 32, 62</a>		
2910000	System box EasyMop CR with lid and seal	■	Cleaning trolley with impregnation
2910001	Lid	■	<a href="#">pp. 20, 40 et seq.</a>
2910003	Seal		
	<b>System box EasyMop CR</b> The solution for impregnation in cleanrooms without sterility requirements. Different colours, e.g. for designing your own individual zone concept <a href="#">pp. 32, 62</a>		
2910010	System box EasyMop CR with lid and seal	■	Cleaning trolley with impregnation
2910021	Lid	■	<a href="#">pp. 20, 40 et seq.</a>
2910003	Seal		
	<b>System box EasyMop CR</b> The solution for impregnation in cleanrooms without sterility requirements. Different colours, e.g. for designing your own individual zone concept <a href="#">pp. 32, 62</a>		
2910030	System box EasyMop CR with lid and seal	■	Cleaning trolley with impregnation
2910031	Lid	■	<a href="#">pp. 20, 40 et seq.</a>
2910003	Seal		
	<b>System box EasyMop CR</b> The solution for impregnation in cleanrooms without sterility requirements. Different colours, e.g. for designing your own individual zone concept <a href="#">pp. 32, 62</a>		
2910040	System box EasyMop CR with lid and seal	■	Cleaning trolley with impregnation
2910041	Lid	■	<a href="#">pp. 20, 40 et seq.</a>
2910003	Seal		
	<b>System box EasyMop CR</b> The solution for impregnation in cleanrooms without sterility requirements. Different colours, e.g. for designing your own individual zone concept <a href="#">pp. 32, 62</a>		
2910060	System box EasyMop CR with lid and seal	■	Cleaning trolley with impregnation
2910061	Lid	■	<a href="#">pp. 20, 40 et seq.</a>
2910003	Seal		
	<b>System box EasyMop CR</b> The solution for impregnation in cleanrooms without sterility requirements. Different colours, e.g. for designing your own individual zone concept <a href="#">pp. 32, 62</a>		
2910070	System box EasyMop CR with lid and seal	■	Cleaning trolley with impregnation
2910071	Lid	■	<a href="#">pp. 20, 40 et seq.</a>
2910003	Seal		

Article No.	Description	Colour	Suitable for system trolley
	<b>MopFix</b> Stabilisation assistance during impregnation of a small number of King GMP mops (approx. 4 – 7) 3500215 MopFix		Cleaning trolley with impregnation EasyMop GMP (stainless steel system box) <a href="#">▶ pg. 40 et seq.</a>
	<b>Tray for system box EasyMop CR</b> Carries two system boxes EasyMop in work or impregnation position 2920001 Tray for system box EasyMop 2920006 Tray for system box EasyMop	 	Cleaning trolley with impregnation <a href="#">▶ pg. 40 et seq.</a> for grey areas <a href="#">▶ pg. 56 et seq.</a>
	<b>Flat wringer Ringo GMP</b> Manufactured from high-grade stainless steel; certified for use in areas under sterile conditions GMP A/B With direct drive 3560000 Flat wringer Ringo GMP	Stainless steel	Cleaning trolley with flat wringer <a href="#">▶ pg. 50 et seq.</a>
	<b>Flat wringer Clino stainless steel</b> Manufactured from high-grade stainless steel; with transmission mechanism for an always consistent level of moisture in the mop 1900002 Flat wringer Clino stainless steel	Stainless steel	Cleaning trolley with flat wringer <a href="#">▶ pg. 50 et seq.</a> for grey areas <a href="#">▶ pg. 56 et seq.</a>
	<b>MopFloat GMP</b> The innovative, validatable stainless steel impregnation system for areas through GMP A/B 3500810 MopFloat GMP 3500830 Metering insert 100 ml 3500832 Metering insert 250 ml 3500834 Metering insert 400 ml	Stainless steel	Cleaning trolley with MopFloat <a href="#">▶ pg. 46 et seq.</a>
	<b>MopFloat CR</b> The innovative, validatable impregnation system for cleanrooms without sterility requirements 3500820 MopFloat CR 3500830 Metering insert 100 ml 3500832 Metering insert 250 ml 3500834 Metering insert 400 ml	Stainless steel	Cleaning trolley with MopFloat <a href="#">▶ pg. 46 et seq.</a> for grey areas <a href="#">▶ pg. 56 et seq.</a>
	<b>25-litre stainless steel container</b> With scaling 8- and 16-litres 3500032 25-litre stainless steel container 3500078 Lid for 25-litre stainless steel container 3530210 Rack for 25-litre stainless steel container for Clino CR5	Stainless steel Stainless steel	Cleaning trolley with MopFloat <a href="#">▶ pg. 46 et seq.</a> with flat wringer <a href="#">▶ pg. 50 et seq.</a>



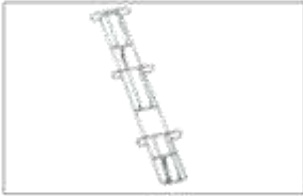






Article No.	Description	Colour	Suitable for system trolley
	<b>25-litre bucket</b> Polypropylene, with scaling from 1 – 20 litres 2025001 25-litre bucket 2025002 25-litre bucket 2025003 25-litre bucket 2025004 25-litre bucket 2025005 25-litre bucket	■ ■ ■ ■ □	Cleaning trolley with MopFloat <a href="#">▶ pg. 48 et seq.</a> with flat wringer <a href="#">▶ pg. 50 et seq.</a> for grey areas <a href="#">▶ pg. 56 et seq.</a>
	<b>15-litre bucket</b> , Polypropylene, with scaling from 1 – 10 litres 2015001 15-litre bucket 2015002 15-litre bucket 2015003 15-litre bucket 2015004 15-litre bucket 2015005 15-litre bucket 2000150 Lid for 15-litre bucket	■ ■ ■ ■ □ □	Cleaning trolley with MopFloat <a href="#">▶ pg. 48 et seq.</a> with flat wringer <a href="#">▶ pg. 50 et seq.</a> for grey areas <a href="#">▶ pg. 56 et seq.</a>
	<b>15-litre bucket with stainless steel handle</b> Polypropylene, with scaling from 1 – 15 litres, autoclavable 3550009 15-litre bucket 3550010 15-litre bucket 3550008 15-litre bucket 2000155 Lid for 15-litre bucket with stainless steel handle	■ ■ ■ ■	CR6 <a href="#">▶ pg. 56</a>
	<b>15-litre bucket Ergo</b> With ergonomic handle and scaling from 1 – 12 litres 2815001 15-litre bucket Ergo 2815012 15-litre bucket Ergo 2815004 15-litre bucket Ergo 2815006 15-litre bucket Ergo	■ ■ ■ ■	STE series for grey areas <a href="#">▶ pg. 56 et seq.</a>
	<b>Stainless steel container MopTen</b> Made from high-quality stainless steel; for 10 mop covers; can be combined with MopJump 3500022 MopTen 3530187 Bucket support for MopTen 3500210 MopJump	Stainless steel	Cleaning trolley with EasyMop <a href="#">▶ pg. 40 et seq.</a> with MopFloat <a href="#">▶ pg. 48 et seq.</a> with flat wringer <a href="#">▶ pg. 50 et seq.</a>
	<b>9-litre stainless steel container</b> Made from high-grade stainless steel with tightly welded handles 3500016 9-litre stainless steel container 3500076 Lid for 9-litre stainless steel container 3500060 9-litre container for mops with carrier for retrofitting	Stainless steel	Cleaning trolley with EasyMop <a href="#">▶ pg. 40 et seq.</a> with MopFloat <a href="#">▶ pg. 48 et seq.</a> with flat wringer <a href="#">▶ pg. 50 et seq.</a>
	<b>5-litre plastic container</b> Scaling 1–4 litres 2088010 5-litre plastic container for all CR4 in stainless steel-plastic combination Can be used both as a tray (see image) and as a collecting container in disposal area <a href="#">▶ pg. 48</a>	transparent	Cleaning trolley with EasyMop CR <a href="#">▶ pg. 40 et seq.</a> with MopFloat <a href="#">▶ pg. 48 et seq.</a> with flat wringer <a href="#">▶ pg. 50 et seq.</a>

Article No.	Description	Colour	Suitable for system trolley
	<p><b>MopJump system for 9-litre stainless steel container</b> Enables the contactless reception of mops, autoclavable</p> <p>3500020 MopJump system for 9-litre stainless steel container</p> <p>2008008 MopJump system for 15-litre plastic bucket</p>	Stainless steel	for 9-litre stainless steel container and all 15-litre buckets
	<p><b>ClinoBar bottle holder</b> For all standard bottle sizes, incl. handle carrier</p> <p>2870003 ClinoBar bottle holder</p> <p>2870008 ClinoBar bottle holder</p> <p>2870006 ClinoBar bottle holder</p>	<p>Blue</p> <p>Green</p> <p>Grey</p>	For all STE trolleys in the grey area <a href="#">▶ pg. 56</a>
	<p><b>Bottle holder for 4 bottles</b> Wire basket made of stainless steel, autoclavable</p> <p>2001209 Bottle holder for four bottles with handle carrier</p> <p>1901209 Bottle holder for four bottles without handle carrier</p>	Stainless steel	For all C9 and C7 trolleys in the grey area <a href="#">▶ pg. 58</a>
	<p><b>4-litre stainless steel container</b> With scaling from 1-4 litres, autoclavable</p> <p>3500007 4-litre stainless steel container</p> <p>3500074 Lid for 4-litre stainless steel container</p> <p>3500070 4-litre stainless steel container with swivel handle for retrofitting</p>	Stainless steel	<p>Cleaning trolley with EasyMop <a href="#">▶ pg. 40 et seq.</a></p> <p>with MopFloat <a href="#">▶ pg. 46 et seq.</a></p> <p>with flat wringer <a href="#">▶ pg. 50 et seq.</a></p>
	<p><b>6-litre bucket with stainless steel handle</b> With scaling from 1-6 litres, autoclavable</p> <p>3550012 6-litre bucket</p> <p>3550011 6-litre bucket</p> <p>3550014 6-litre bucket</p> <p>3550013 6-litre bucket</p> <p>3550015 6-litre bucket</p>	<p>Red</p> <p>Blue</p> <p>Yellow</p> <p>Green</p> <p>White</p>	For CR6 series and grey areas <a href="#">▶ pp. 55, 58, 59</a>
	<p><b>6-litre bucket</b> with scaling from 1-5 litres</p> <p>2000601 6-litre bucket</p> <p>2000602 6-litre bucket</p> <p>2000603 6-litre bucket</p> <p>2000604 6-litre bucket</p> <p>2000605 6-litre bucket</p>	<p>Red</p> <p>Blue</p> <p>Yellow</p> <p>Green</p> <p>White</p>	For all trolleys in the grey area <a href="#">▶ pp. 58, 59</a>
	<p><b>Clino PlusBox</b> For the impregnation of cloths and/or mops</p> <p>2088611 Clino PlusBox</p> <p>2088622 Clino PlusBox</p> <p>2088633 Clino PlusBox</p> <p>2088644 Clino PlusBox</p> <p>2088666 Clino PlusBox</p> <p>2088677 Clino PlusBox</p>	<p>Red</p> <p>Blue</p> <p>Yellow</p> <p>Green</p> <p>Grey</p> <p>White</p>	<p>Cleaning trolley with EasyMop <a href="#">▶ pg. 40 et seq.</a></p> <p>with MopFloat <a href="#">▶ pg. 46 et seq.</a></p> <p>with flat wringer <a href="#">▶ pg. 50 et seq.</a></p> <p>for grey areas <a href="#">▶ pg. 56 et seq.</a></p>

	Article No.	Description	Colour	Suitable for system trolley
	2000610	<b>Lid for 6-litre bucket</b> With hooks for side mounting Lid for 6-litre bucket	transparent	For all trolleys in the grey area ▶ <a href="#">pg. 58, 59</a>
	2088650 2088653	<b>Accessories for Clino PlusBox</b> Includes foldable lid with grip recesses and insert for the absorption of surplus cleaning solution Lid for Clino PlusBox Insert for absorption of surplus cleaning solution		Cleaning trolley with EasyMop ▶ <a href="#">pg. 40 et seq.</a> with MopFloat ▶ <a href="#">pg. 46 et seq.</a> with flat wringer ▶ <a href="#">pg. 50 et seq.</a> for grey areas ▶ <a href="#">pg. 56 et seq.</a>
	2088655	<b>Sieve for Clino PlusBox</b> Removable sieve for consistent impregnation of textiles Sieve for Clino PlusBox		Cleaning trolley with EasyMop ▶ <a href="#">pg. 40 et seq.</a> with MopFloat ▶ <a href="#">pg. 46 et seq.</a> with flat wringer ▶ <a href="#">pg. 50 et seq.</a> for grey areas ▶ <a href="#">pg. 56 et seq.</a>
	3550020	<b>Stainless steel basket</b> For reception of four 6-litre buckets ▶ <a href="#">pg. 56</a> Stainless steel basket	Stainless steel	For CR6 and CR6s ▶ <a href="#">pg. 55</a>
	3500036	<b>Stainless steel tray</b> For depositing utensils, autoclavable Stainless steel tray	Stainless steel	For Clino CR5 ▶ <a href="#">pg. 47, 51</a>
	2017017 3550030	<b>Handle carrier</b> Permanently elastic and safe locking carrier: for handles ranging in size between 20 and 30 mm in diameter, autoclavable Toolifix 22 mm Handle carrier for Clino CR6		For all Clino system trolleys
	2088620 2088640 2088660 2088610	<b>Clino MultiBox</b> For enclosed appearance and open function on the trolley Clino MultiBox Clino MultiBox Clino MultiBox Clino MultiBox		For all STE trolleys in the grey area ▶ <a href="#">pg. 57, 60</a>



## Components for CR4

Article No.	Description	Position	Suitable for system trolley
	<b>Storage area for 3 mop frames</b> Can be used for all PPS mop frames, autoclavable, for assembly variant 2 (stainless steel) 3500088 Storage area for 3 mop frames	▶	Cleaning trolley CR4 with EasyMop ▶ pp. 42, 45 with MopFloat ▶ pp. 48, 49 with flat wringer ▶ pp. 52, 53
	<b>Holder frame for 4-litre stainless steel container</b> Fits the ClinoLink holder system, autoclavable 3500098 Holder frame for 4-litre stainless steel containers, upper left* 3500099 Holder frame for 4-litre stainless steel containers, upper right* * (when standing in front of the CR4) ▶ pg. 69	▶ ▶	Cleaning trolley CR4 with EasyMop ▶ pp. 42, 45 with MopFloat ▶ pp. 48, 49 with flat wringer ▶ pp. 52, 53
	<b>Holder frame for 4-litre stainless steel container</b> Fits the ClinoLink holder system, autoclavable, for assembly variant 3 3500094 Holder frame for 4-litre stainless steel container, middle ▶ pg. 69	▶	Cleaning trolley CR4 with EasyMop ▶ pp. 42, 45 with MopFloat ▶ pp. 48, 49 with flat wringer ▶ pp. 52, 53
	<b>Holder frame for Clino PlusBox</b> Fits the ClinoLink holder system, autoclavable 3500096 Holder frame for Clino PlusBox, upper left* 3500097 Holder frame for Clino PlusBox, upper right* * (when standing in front of the CR4) ▶ pg. 62	▶ ▶	Cleaning trolley CR4 with EasyMop ▶ pp. 42, 45 with MopFloat ▶ pp. 48, 49 with flat wringer ▶ pp. 52, 53
	<b>Holder frame for Clino PlusBox</b> Fits the ClinoLink holder system, autoclavable, for assembly variant 3 3500095 Holder frame for Clino PlusBox, middle ▶ pg. 62	▶	Cleaning trolley CR4 with EasyMop ▶ pp. 42, 45 with MopFloat ▶ pp. 48, 49 with flat wringer ▶ pp. 52, 53
	<b>Carrier for 9-litre stainless steel container and 5-litre transparent plastic container</b> ▶ pg. 69 For attaching above the system boxes for assembly variant 4 3530188 Carrier for 9-litre stainless steel container, middle	▶	Cleaning trolley CR4 with EasyMop ▶ pp. 42, 45
	<b>Carrier for mop frame</b> Carrier for mop frame and handle fits multifunctional holder ClinoLink, autoclavable, for assembly variant 1 3500093 Carrier for handle, made of stainless steel 3500092 Mop frame support, made of stainless steel ▶ pg. 69	▶ ▶	For all CR4 variants with EasyMop ▶ pp. 42, 45 with MopFloat ▶ pp. 48, 49 with flat wringer ▶ pp. 52, 53

Article No.	Description	Colour	Suitable for system trolley
	<p><b>Swivel castor CR 100 mm</b> Autoclavable castors with double ball bearings</p> <p>3500100 Swivel castor 100 mm 3500150 Swivel castor 100 mm with locking device</p>		<p>For all Clino system trolleys with EasyMop <a href="#">▶ pg. 40 et seq.</a> with MopFloat <a href="#">▶ pg. 46 et seq.</a> with flat wringer <a href="#">▶ pg. 50 et seq.</a></p>
	<p><b>Swivel castor, electrically conductive 100 mm</b> Electrically conductive castors with double ball bearings</p> <p>2013430 Swivel castor 100 mm 2013440 Swivel castor 100 mm with locking device</p>		<p>For all Clino system trolleys with EasyMop <a href="#">▶ pg. 40 et seq.</a> with MopFloat <a href="#">▶ pg. 46 et seq.</a> with flat wringer <a href="#">▶ pg. 50 et seq.</a></p>
	<p><b>Clino plastic swivel castor 125 mm</b> Best running comfort and maximum ergonomics of the PPS cleaning trolley through ball bearing in running and turning direction</p> <p>2013115 Clino plastic swivel castor 125 mm 2013117 Clino plastic swivel castor/F 125 mm with locking device</p>		<p>For all trolleys in the grey area <a href="#">▶ pg. 56 et seq.</a></p>
	<p><b>Deflector ring</b> For protection of walls in object through elastic sheath</p> <p>2014030 for 22 mm tube with soft abutting edges 2014010 9 cm ø for 22 mm tube</p>	■ ■	<p>For all system trolleys without sterility requirements, for all system trolleys used in grey areas <a href="#">▶ pg. 56 et seq.</a></p>
	<p><b>Mini disposal with 4-litre stainless steel container ...</b> e.g. for cloth release, suitable for multi-functional ClinoLink holder Details <a href="#">▶ pp. 38, 89</a></p> <p> ... and Clino PlusBox</p>		<p>Cleaning trolley CR4 with EasyMop <a href="#">▶ pp. 42, 45</a> with MopFloat <a href="#">▶ pp. 48, 49</a> with flat wringer <a href="#">▶ pp. 52, 53</a></p>
	<p><b>MopDrop</b> Contactless disposal of the mop</p> <p>3500019 MopDrop</p>		<p>Cleaning trolley CR1, CR4 and CR9 with EasyMop <a href="#">▶ pg. 40 et seq.</a> with MopFloat <a href="#">▶ pg. 46 et seq.</a> with flat wringer <a href="#">▶ pg. 50 et seq.</a></p>
	<p><b>Small disposal with 9-litre stainless steel container</b> For mop release Details <a href="#">▶ pp. 38</a></p>		<p>Cleaning trolley CR3 <a href="#">▶ pg. 54</a></p>



#### Medium-sized disposal 1 x 35 litre

For the release of contaminated mops

Details ► [pg. 35](#)

- Sack holder frame
- Insert 1 x 35 litre
- 9-litre stainless steel container with carrier

Cleaning trolley CR1, CR4  
with EasyMop

► [pg. 40 et seq.](#)

with MopFloat

► [pg. 46 et seq.](#)

with flat wringer

► [pg. 50 et seq.](#)



#### Large disposal 1 x 70 litre

For the release of contaminated mops

Details ► [pg. 35](#)

- Sack holder frame
- Bag wire 1 x 70 litre
- Sack support

Cleaning trolley CR9

► [pg. 43](#)



#### Release frame 1 x 35 litre

Divides the disposal unit in two areas, e.g. for the separate release of contaminated mops and cloths

3530150 Release frame 1 x 35 litre

Details ► [pg. 35](#)

Cleaning trolley CR9

► [pg. 43](#)



#### Disposal 2 x 70 litre

For separation of waste or separate release of mops and residual waste

- Sack holder frame
- Bag wire 2 x 70 litre
- Sack support

For all medium-sized  
and large trolleys  
in the grey area

► [pg. 56 et seq.](#)



#### Mini sterile disposal bag

For 4-litre stainless steel container and Clino PlusBox

PU: 10 parts, delivery time: approx. 6 weeks

3580014 Mini sterile disposal bag

Details ► [pg. 37](#)

4-litre stainless steel  
container

Clino PlusBox



#### Small sterile disposal bag

For 9-litre stainless steel container and all EasyMop GMP and CR system boxes

PU: 10 parts

3580015 Small sterile disposal bag

Details ► [pg. 37](#)

9-litre stainless steel  
container




CR3 ► [pg. 54](#)

System box EasyMop GMP

System box EasyMop CR

► [pg. 40 et seq., 63](#)



Article No.	Description	Colour	Suitable for system trolley																				
	<p><b>Medium-sized sterile disposal bag</b> For disposal unit 1 x 35 litre (CR1 and CR4) PU: 10 parts 3580016 Medium-sized sterile disposal bag Details ▶ <a href="#">pg. 37</a></p>		<p>Cleaning trolley CR1, CR4 with EasyMop ▶ <a href="#">pg. 40 et seq.</a> with MopFloat ▶ <a href="#">pg. 46 et seq.</a> with flat wringer ▶ <a href="#">pg. 50 et seq.</a></p>																				
	<p><b>Large sterile disposal bag</b> For disposal unit 1 x 70 litre or 2 x 70 litre PU: 10 parts 3580017 Large sterile disposal bag Details ▶ <a href="#">pg. 37</a></p>		<p>Cleaning trolley CR9 ▶ <a href="#">pg. 43</a> For all medium-sized and large trolleys in the grey area ▶ <a href="#">pg. 55 et seq.</a></p>																				
	<p><b>MemoBoard</b> Lid for 70-litre disposal with reception for work instructions and the like, in A5 page format, laminated</p> <table border="0"> <tr> <td>2806401</td> <td>MemoBoard Clino</td> <td>2806411</td> <td>MemoBoard Profi</td> <td><span style="color: red;">■</span></td> </tr> <tr> <td>2806402</td> <td>MemoBoard Clino</td> <td>2806412</td> <td>MemoBoard Profi</td> <td><span style="color: blue;">■</span></td> </tr> <tr> <td>2806403</td> <td>MemoBoard Clino</td> <td>2806413</td> <td>MemoBoard Profi</td> <td><span style="color: green;">■</span></td> </tr> <tr> <td>2806406</td> <td>MemoBoard Clino</td> <td>2806416</td> <td>MemoBoard Profi</td> <td><span style="color: grey;">■</span></td> </tr> </table>	2806401	MemoBoard Clino	2806411	MemoBoard Profi	<span style="color: red;">■</span>	2806402	MemoBoard Clino	2806412	MemoBoard Profi	<span style="color: blue;">■</span>	2806403	MemoBoard Clino	2806413	MemoBoard Profi	<span style="color: green;">■</span>	2806406	MemoBoard Clino	2806416	MemoBoard Profi	<span style="color: grey;">■</span>		<p>For all large trolleys in the grey area ▶ <a href="#">pg. 56</a></p>
2806401	MemoBoard Clino	2806411	MemoBoard Profi	<span style="color: red;">■</span>																			
2806402	MemoBoard Clino	2806412	MemoBoard Profi	<span style="color: blue;">■</span>																			
2806403	MemoBoard Clino	2806413	MemoBoard Profi	<span style="color: green;">■</span>																			
2806406	MemoBoard Clino	2806416	MemoBoard Profi	<span style="color: grey;">■</span>																			

## Cleanroom vacuum Clino® KR/A



The Clino KR/A series vacuums have been specifically designed for use in technical cleanrooms and in the pharmaceutical industry. Due to its modular design, it can be specifically configured to meet the needs of dry or wet vacuum operations. Even special versions, such as compressed air powered turbines for explosion protected areas, are available:

### The characteristics:

- + Multi-level filter system up to a separation level of 99.999%
- + Made entirely of high-quality stainless steel
- + Autoclavable
- + Modular design: Object-specific adjustments are possible
- + For the vacuuming of hazardous dusts
- + Comprehensive range of accessories
- + Can be delivered with 230 V, 400 V or powered by compressed air
- + Made in Germany

### High performance special equipment in modular design



ULPA 15 / HEPA 14:  
Separation level at least  
99.999%



Module structure:  
Wet and dry vacuum



Comprehensive  
accessory programme



A

## Clino® KR/A 10

GMP

Mobile, autoclavable cleanroom vacuum (dry vacuum) for the use in ISO class 4/5 cleanrooms. Specifically designed for cleanroom use.

- ◆ Made entirely of high-quality stainless steel
- ◆ With a quadruple filter system
- ◆ Collection container and filter chamber autoclavable
- ◆ Comprehensive accessories deliverable, autoclavable
- ◆ All elements can be easily removed
- ◆ Soundproof turbo ventilator
- ◆ Simple operation and maintenance
- ◆ Fast and safe emptying
- ◆ Cable length: 8 m; with safety plug
- ◆ Non-marking special swivel castors, autoclavable
- ◆ Delivery times upon agreement
- ◆ Including accessory set:  
3590773 Hand pipe, 3590776 Suction hose CBS, 3590780 Floor nozzle with brush strip, 3590784 Joint nozzle and 3590788 Diagonal pipe nozzle

Clino® KR/A 10

Art. No.: 3590710

### Technical data Clino KR/A 10 Art. No.: 3590710

Output	1000 W	Container volume (dry)	10 l	Separation level	99.999 %
Voltage	230 V	Intake volume (max.)	160 m <sup>3</sup> /h	Empty weight	15 kg
Noise level	67 dB (A)	Length x width	400 x 400 mm		
Negative pressure max.	250 mbar	Height	760 mm		



With cable holder



With quick clamp



Pre-filter, PTFE coated, antistatic



With Hepa filter in front of ...



... and behind the motor, exhaust air is emitted near floor, optimal for use in cleanroom



With sealable microfibre bags K4, fast and safe emptying through newly developed concept





Made entirely of high-quality stainless steel

A

GMP

## Clino® KR/A 30

The cleanroom Clino KR/A 30 has been developed for the intake of dust, wet production residues and liquids in the ISO class 4/5 cleanrooms. The handling is very easy due to the lowerable and easily removable container.

Filter system during use as a dry vacuum

- Microfibre bag, antistatic
- Polyester pre-filter, antistatic
- Optional activated carbon filter (gases, vapours, odours)
- In front of the motor: HEPA H14 (99.999%)
- Behind the motor: HEPA H14 (99.999%)

Separation system during wet vacuum uses

- Float switch-off
- Optional activated carbon filter (gases, vapours, odours)
- In front of the motor: HEPA H14 (99.999%)
- Behind the motor: HEPA H14 (99.999%)
- Delivery time upon agreement

Clino® KR/A 30

Art. No.: 3590720 Dry vacuum

Art. No.: 3590730 Wet vacuum

Art. No.: 3590740 Vacuum for ex-areas



### Technical data Clino KR/A 30

Output	1000 W	Container volume (dry)	30 l	Height	1010 mm
Voltage	230 V	Container volume (wet)	16 l	Separation level	99.999 %
Noise level	67 dB (A)	Intake volume max.	150 m³/h	Empty weight	34 kg
Negative pressure max.	220 mbar	Length x width	600 x 510 mm		



Comfortable lowering of container; container with 4 castors



With float switch-off when used as a wet vacuum



Stainless steel trolley with 4 castors, electrically conductive



With security cable holder



With suction pipe holder



With quick clamp

## Accessories

Every accessory is suitable for all cleanroom vacuums



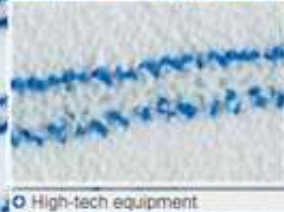
Article No.	Description	Colour
	<p><b>A</b> <b>Hand pipe</b> 3-parts, made of stainless steel, length 1340 mm, Ø 38 mm</p> <p><b>Ex</b> 3590773 Hand pipe, 3-parts with mounting for KR/A 10 and KR/A 30</p>	stainless steel
	<p><b>High-tech suction hoses</b> for hand pipe Ø 38 mm, length: 3 m</p> <p>3590779 Nitrile suction hose (see image) Multi-layer Nitrile, extremely smooth interior</p> <p>3590776 CBS suction hose High-quality EVA plastic, very flexible</p>	<p><b>A</b> <b>Ex</b> grey</p> <p><b>Ex</b> blue</p>
	<p><b>A</b> <b>Floor nozzles</b> for hand pipe, Ø 38 mm, 300 mm width; additional widths available upon request.</p> <p>3590780 Floor nozzle with brush strips PA, for dry vacuum 3590710, 3590720, 3590740</p> <p>3590781 Floor nozzle with rubber lip PA (see image), for wet vacuum 3590730</p>	<p><b>Ex</b> black</p> <p><b>Ex</b> black</p>
	<p><b>Microfibre filter bags</b> 4-layer design, with sealing cap for secure disposal. Very high filter performance. Also suitable for vacuuming glass breakages with small amounts of liquid. Can be used for Clino KR/A 10 (3590710) and Clino KR/A 30 Dry vacuum (3590720)</p> <p>3590750 Microfibre filter bags</p>	white
	<p><b>A</b> <b>Diagonal pipe nozzles</b> for hand pipe Ø 38 mm</p> <p>3590788 Diagonal pipe nozzle PA 200 mm (see image)</p> <p>3590787 Diagonal silicone pipe nozzle 200 mm</p> <p>3590789 Diagonal stainless steel pipe nozzle 325 mm</p>	<p><b>Ex</b> black</p> <p><b>Ex</b> transparent</p> <p><b>Ex</b> stainless steel</p>
	<p><b>A</b> <b>Conical rubber pipe nozzle 90°</b> for hand pipe Ø 38 mm, length 320 mm Additional materials and bending radii available upon request.</p> <p>3590792 Conical rubber pipe nozzle 90° PA</p> <p>3590793 Conical rubber pipe nozzle 90° silicone (see image)</p>	<p><b>Ex</b> black</p> <p><b>Ex</b> transparent</p>
	<p><b>A</b> <b>Compartment nozzle</b> for hand pipe Ø 38 mm, 120 x 35 mm</p> <p>3590796 Compartment nozzle PA 200 mm</p> <p>3590797 Compartment nozzle silicone 200 mm (see image)</p>	<p><b>Ex</b> black</p> <p><b>Ex</b> transparent</p>
	<p><b>A</b> <b>Joint nozzle</b> for hand pipe Ø 38 mm</p> <p>3590784 Joint nozzle PA 300 mm (see image)</p> <p>3590785 Stainless steel joint nozzle 305 mm</p>	<p><b>Ex</b> black</p> <p><b>Ex</b> stainless steel</p>

Select a suitable product from our extensive range of accessories. We offer you all accessory parts in a standard design, autoclavable or suitable for explosive-protected areas. For this, please request our special cleanroom vacuum flyer.

## Cleanroom-suitable mop design



○ Cleanroom suitable bordering



○ High-tech equipment



○ Robust backing material



○ open pockets, drainage function



○ Hollow-knitted bagging with sealed edges, autoclavable





## Cleanroom suitability/purity suitability

- ⊕ **Qualification**  
Certification as TESTED DEVICE by Fraunhofer
- ⊕ **Sterility**  
Autoclavable and resistant against gamma radiation
- ⊕ **Material compatibility**  
Tested with all standard disinfectants/groups of active substances



## Material and processing

- ⊕ **High-tech material**  
Special yarn made from 100% polyester microfiber processed in a manner suitable for cleanrooms
- ⊕ **Sealed edges**  
All material edges are bordered and/or sealed
- ⊕ **Cleanability**  
Open pockets enable the rinsing of particles in the treatment process



## Cleaning performance and reproducibility

- ⊕ **99.9% of all particles**  
can be safely removed
- ⊕ **Tested wetting process**  
guarantees reproducible disinfection success
- ⊕ **Water absorption and water release**  
have been tested and appraised using scientific methods
- ⊕ **Optimal cleaning performance**  
Adhering impurities and disinfection agent residues are safely removed



## Cost-effectiveness

- ⊕ **Very high square-metre cleaning rate**  
ensures low cost per application
- ⊕ **High-quality manufacturing**  
enables 50 sterilisation cycles or over 100 treatment cycles without sterilisation



## Clino® CR Special mops – reusable



Our reusable mops represent the state-of-the-art in cleanroom cleaning. Innovative materials – that can stand up to the wear of numerous wash and sterilisation cycles and simultaneously achieve validatable cleaning and disinfection processes.

### The characteristics:

- ⊕ Manufactured from **high-tech materials suitable for the cleanroom**
- ⊕ **Cleaning efficiency and particle emission approved by an expert report\***  
\* for models with IPA certificate
- ⊕ Qualified for the use in areas **under sterile conditions: GMP A/B**
- ⊕ Up to **50 sterilisation cycles** possible
- ⊕ Therefore **low costs per use**
- ⊕ Products can also be **leased**

### The reference class

#### Individualisation



Individual labelling of different areas through printing (in colour or black and white)









Attachment of barcode labels



Sewing in of RFID chips

All types of special solutions are feasible within a short period of time

#### Suitable for all PPS mop frames:

- Clino stainless steel 
- Clino stainless steel with Clino Connect 
- Aluminium with Clino Connect 
- Stainless steel wire with Clino Connect 
- Inverse with Clino Connect 
- Additional mop frames 



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## King GMP



Art. No.: 3500051

- Removes 99.9% of all particles in a single-stage process
- Safe disinfection of GMP areas through validatable wetting process
- Autoclavable up to 50 processing cycles, resistant to disinfection agents and gamma radiation
- Optimised for the EasyMop GMP impregnation method
- Minimal amount of particle emission

**Types of floors** All standard cleanroom and pharmaceutical floors

**Working material** 100% high-tech manufactured polyester microfiber yarn suitable for the cleanroom – hollow-knitted bagging with sealed edges Loop along the same lines as working material, with cover specifically suited for impregnation, polyester pocket with drainage function

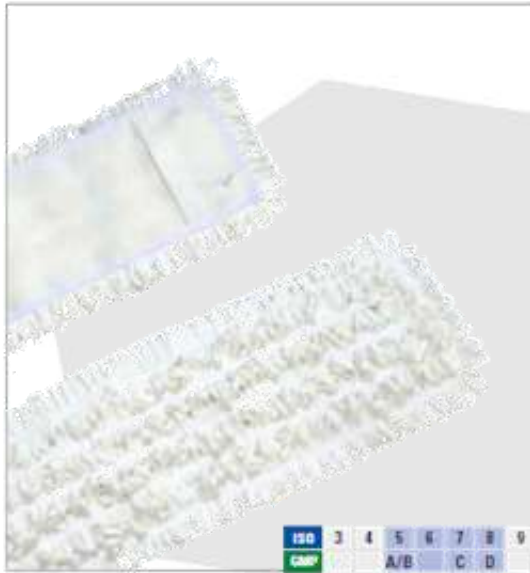
**Equipment**

**Weight** 160 g

**Dimensions** 40 cm

**Packaging** Packaging Unit: 10 parts

Also deliverable in smaller quantities



1/2



## King CR

Art. No.: 3500040

- Removes 99.9% of all particles in a single-stage process
- Safe disinfection of GMP areas through validatable wetting process
- Autoclavable up to 50 processing cycles, resistant to disinfection agents and gamma radiation
- Optimised for the flat wringer Ringo GMP
- Minimal amount of particle emission

**Types of floors** All standard cleanroom and pharmaceutical floors

**Working material** 100% high-tech manufactured polyester microfiber yarn suitable for the cleanroom – hollow-knitted bagging with sealed edges Loop along the same lines as working material, special laminated cover, textile pocket with drainage function

**Equipment**

**Weight** 140 g

**Dimensions** 40 cm

**Packaging** Packaging Unit: 10 parts

Also deliverable in smaller quantities





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## Lord CR

Art. No.: 3500048

- + For cleaning and disinfection of GMP areas
- + Short loop form, good gliding characteristics
- + Autoclavable up to 50 processing cycles, resistant to disinfection agents and gamma radiation
- + Optimised for flat wringer
- + Minimal amount of particle emission

**Types of floors** All standard cleanroom and pharmaceutical floors

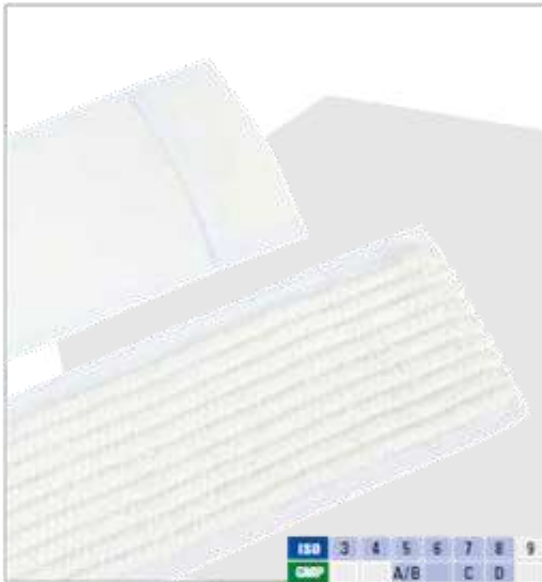
**Working material** 100% high-tech manufactured polyester microfiber yarn suitable for the cleanroom – hollow-knitted bagging with sealed edges, medium-sized loop form

**Equipment** Loop along the same lines as working material with cover, textile pocket with drainage function

**Weight** 125 g

**Dimensions** 40 cm

**Packaging** Packaging Unit: 10 parts  
Also deliverable in smaller quantities



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## King CR-MG

Art. No.: 3500052

- + 100% polyester microfiber with high-low structure
- + Optimal gliding characteristics, suitable for perforated floors
- + Autoclavable
- + High particle absorption through special weaving process
- + Low particle emission

**Types of floors** All standard cleanroom and pharmaceutical floors, perforated floors

**Working material** 100% high-tech manufactured polyester microfiber yarn suitable for the cleanroom – hollow-knitted bagging with sealed edges, processed in special locking technology

**Equipment** with cover, with polyester pocket

**Weight** 60 g

**Dimensions** 40 cm

**Packaging** Pre-washed, single, double-packaged





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## King CR-MG Plus

Art. No.: 3500062

- 100% polyester microfiber with high-low structure, with loop
- Optimal gliding characteristics, suitable for perforated floors
- Autoclavable, not suitable for chlorine-based disinfectants
- High particle absorption through special weaving process
- Low particle emission

**Types of floors** All standard cleanroom and pharmaceutical floors, perforated floors

**Working material** 100% high-tech manufactured polyester microfiber yarn suitable for the cleanroom – hollow-knitted bagging with sealed edges, along the lines of equipment, processed in special locking technology

**Equipment** Loop with cover, with microfiber backfilling, polyester pocket with drainage function, with microfiber and PU foam backfilling

**Weight** 120 g

**Dimensions** 40 cm

**Packaging** Pre-washed, single, double-packaged



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## MicroSicuro CR/A

Art. No.: 2700268

- Removes 99.9% of all particles in a single-stage process
- Safe disinfection of GMP areas through validatable wetting process
- Maximal square metre cleaning rate through use of innovative material combination, ideal for removal of disinfection agent residues
- Autoclavable up to 50 processing cycles, resistant to disinfection agents and gamma radiation
- Through maximum capillary effects, optimally suited for all PPS cleaning methods

**Types of floors** All standard cleanroom and pharmaceutical floors, perforated floors and anti-slip flooring

**Working material** 100% PES microfibers with special soft bristle

**Equipment** With permeable cover, polyester pocket with drainage function, with backfilling for high square metre cleaning rate

**Weight** 110 g

**Dimensions** 40 cm

**Packaging** Packaging Unit: 10 parts

Also deliverable in smaller quantities

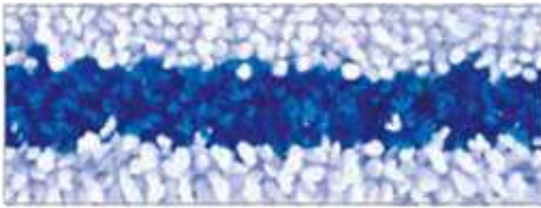




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## MicroMopp Standard CR/A

Art. No.: 3500067

- + Fully enclosed construction made from 100% polyester micro loops, right-angled mop design for optimal use in corners
- + Very good gliding characteristics, not suitable for chlorine-based disinfectants
- + Suitable for dissolving adhesive contamination
- + Suitable for impregnation and flat wringer
- + Autoclavable

**Types of floors** All standard cleanroom and pharmaceutical floors

**Working material** 100% PS microfiber with polypropylene bristle

**Equipment** With permeable cover, with polyester pocket with drainage function, with PU backfilling for high square metre cleaning rate

**Weight** 110 g

**Dimensions** 40 cm

**Packaging** 100 parts per carton

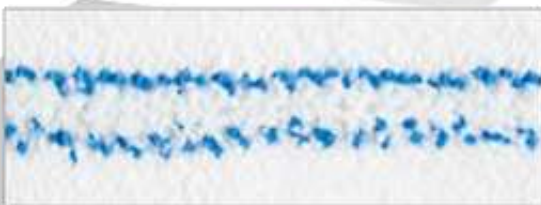
Also deliverable in smaller quantities



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## MicroSicuro CR



Art. No.: 2700266

- + Maximal cleaning performance through 2-component working material
- + Ideal for dissolving adhesive contamination
- + Over 99 % reduction of contamination due to bacterium, yeast and mildew is already achieved when using only ionised water (test method DGMH 2001 Standard method 14)
- + Very high square-metre cleaning rate
- + Through maximum capillary effects, optimally suited for all PPS cleaning methods

**Types of floors** All standard cleanroom and pharmaceutical floors, perforated floors and anti-slip flooring

**Working material** 100 % PES microfibers with PA bristle material

**Equipment** With permeable cover, with belt pocket with drainage function, with backfilling for high square metre cleaning rate

**Weight** 120 g

**Dimensions** 40 cm

**Packaging** Packaging Unit: 10 parts

Also deliverable in smaller quantities

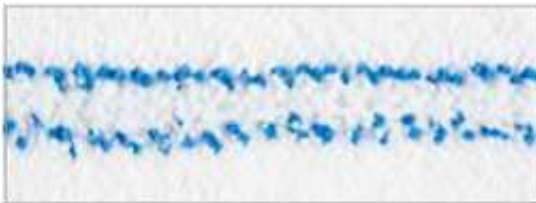




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## MicroSicuro Trapez CR/A

Art. No.: 2700293

- Removes 99.9 % of all particles in a single-stage process
- Safe disinfection of GMP areas through validatable wetting process
- Maximal square metre cleaning rate through use of innovative material combination, ideal for removal of disinfection agent residues
- Autoclavable up to 50 processing cycles, resistant to disinfection agents and gamma radiation
- For the surface cleaning of, for example, isolators and cleaning of difficult-to-reach places
- Suitable for all Trapez mop frames [pg. 99](#)

<b>Types of floors</b>	All smooth surfaces
<b>Working material</b>	100 % PE microfibers with special soft bristle
<b>Equipment</b>	With permeable cover, with polyester pocket with drainage function, with backfilling
<b>Weight</b>	80 g
<b>Dimensions</b>	longer side: 27 cm, shorter side: 22 cm
<b>Packaging</b>	Packaging Unit: 10 parts Also deliverable in smaller quantities



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## Mop CR for wall cleaning tool

Art. No.: 3580038

Art. No.: 3580039 MicroSicuro CR/A for wall cleaning tool

- 100 % polyester microfiber continuous filament yarn
- For cleaning walls, ceiling and hard-to-access areas
- Autoclavable, resistant to disinfection agents
- High-quality stainless steel push buttons

<b>Surfaces</b>	All smooth surfaces
<b>Working material</b>	100% high-tech manufactured polyester microfiber yarn suitable for the cleanroom – hollow-knitted bagging with sealed edges, medium loop form
<b>Equipment</b>	High-quality stainless steel push buttons
<b>Weight</b>	160 g
<b>Dimensions:</b>	40 cm
<b>Packaging</b>	Pre-washed, single, double-packaged



## Clino® CR Special mops – single-use and accessories



In small areas, where the logistical effort for the use of reusable textiles would be too high, single-use mops are a practical solution. When working with harmful substances, such as cytostatics, you will have a higher level of safety.

### The characteristics:

- + Made from special yarn, specially suited for cleanrooms
- + Water retention for high square metre cleaning rates
- + If desired, available as **sterile double-packaged** (gamma irradiated with lot documentation, batch documentation and indicator): Therefore, it can be **directly introduced into areas under sterile conditions GMP A/B**
- + Different variants and packaging units are available
- + **Pocket mop system:** Compatible with all Clino mop frames

### Suitable for all PPS mop frames:

- Clino stainless steel 
- Clino stainless steel with Clino Connect 
- Aluminium with Clino Connect 
- Stainless steel wire with Clino Connect 
- Inverse with Clino Connect 
- Additional mop frames 

### The practical solution – with certainty



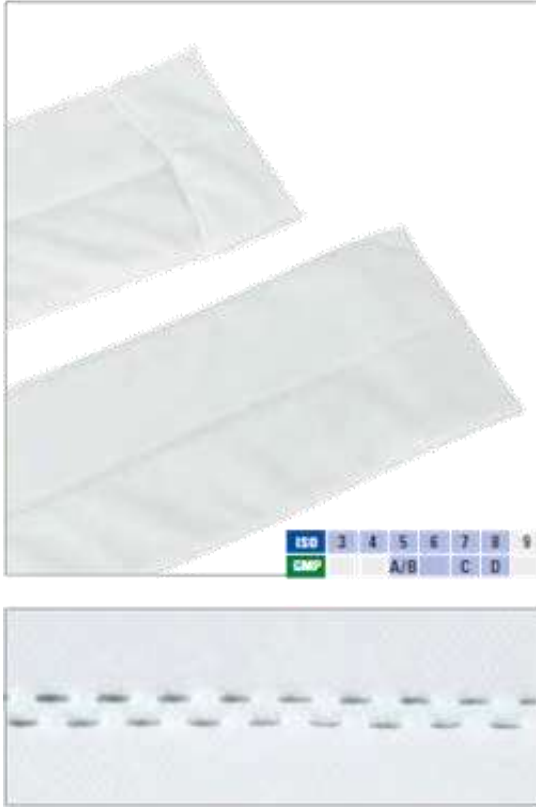
Pocket mop system for easy mop change, even for single-use mops



Processed with ultrasonic technology



If required, available in sterile



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## King CR wiper mop

Art. No.: 3500055

Art. No.: 3500056, gamma irradiated

- + Cost-efficient single-use mop
- + If desired, available sterile double-packaged
- + Ideally suited for cytostatic areas
- + High levels of area output through backfilling
- + Very high-quality, processing suitable for cleanrooms

**Types of floors** All standard cleanroom and pharmaceutical floors

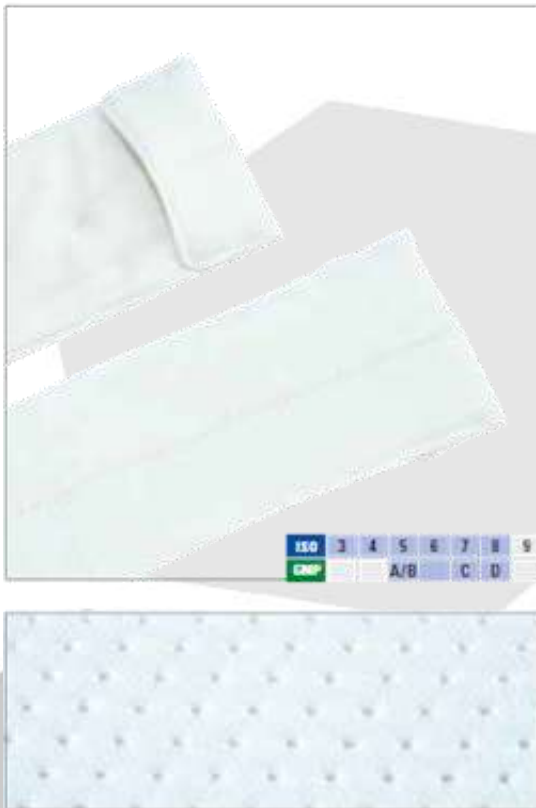
**Working material** 100% polyester

**Equipment** with polyester pocket,  
with backfilling

**Weight** 50 g

**Dimensions** 40 cm

**Packaging** Pre-washed, single, double-packaged



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## King CR wiper mop S

Art. No.: 3500066

Art. No.: 3500068, gamma irradiated



- + Excellent cleaning performance due to 100% polyester microfibers
- + Special structure for optimal particle reception
- + Very high-quality, processing suitable for cleanrooms
- + High levels of area output through backfilling
- + Also ideal for wall and ceiling cleaning, can be sterilised

**Types of floors** All standard cleanroom and pharmaceutical floors

**Working material** 100% polyester with special structure

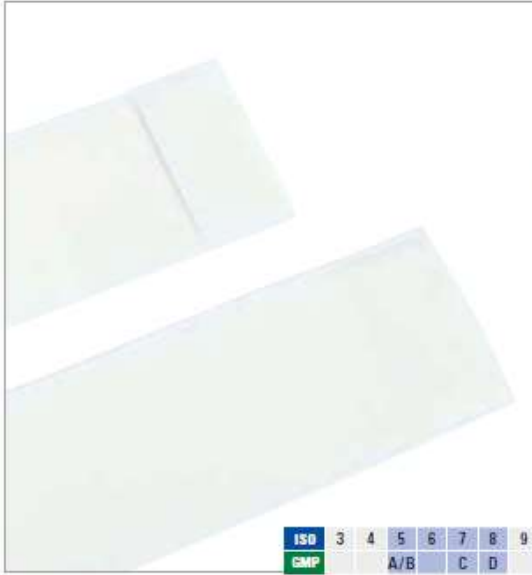
**Equipment** with polyester pocket,  
with backfilling

**Weight** 50 g

**Dimensions** 40 cm

**Packaging** 3500066: 100 parts per carton  
Also deliverable in smaller quantities  
3500068: Pre-washed, single, double-packaged





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## King CR wiper mop PU

Art. No.: 3500057

- + PU foam backfilling as water retention
- + For small areas
- + Sealed edges
- + Not suitable for chlorine-based disinfectants

**Types of floors** All standard cleanroom and pharmaceutical floors

**Working material** 100% polyester

**Equipment** with PU backfilling, with cover, with polyester pocket

**Weight** 30 g

**Dimensions** 40 cm

**Packaging** Pre-washed, single, double-packaged



## Sterile, single-use eyewear

Art. No.: 3580020

- + Highest level of wearing comfort, suitable for eyeglass wearers
- + Indirect ventilation system ensures high degree of safety
- + Highest degree of protection and robustness
- + Scratch-proof
- + No fogging due to Anti-Fog feature
- + Validated ETO sterilisation for use in all areas under sterile conditions
- + Developed for use in areas up to ISO class 4

**Dimensions** 17x8x7 cm

**Weight** 72 g

**Packaging** Packaged individually and under sterile conditions in Tyvek/PE

10 glasses repackaged in Tyvek/PE

**Material** Frame made of lightweight PVC  
Silicone band, not outgassing  
Sight glass made of polycarbonate

**Sight glass thickness** 2.00 mm

**Shelf life** 3 years from the sterilisation date

**Classification** Category 2 as per PPE Directive 89/686/EEC

## Mops for grey areas



Professional mops for use outside of cleanrooms, in controlled areas and for primary cleaning



High level of dirt removal forces through soft bristles



High-tech loop for greatest absorption of small and large dirt particles



Robust pocket design

Even the immediate surroundings of cleanroom areas pose high requirements on the quality of the cleaning: Apart from the overall impression the area makes, the contamination already removed from this area cannot be returned to the previously controlled area. For this, we recommend the following mops from our professional series, which have, in part, also been verified and certified.

### The characteristics:

- +** Highest quality from the professional industrial cleaning
- +** Maximum cleaning and area output
- +** Best processing quality
- +** Extreme durability of up to 500 washing cycles

### Suitable for all PPS mop frames:

- Clino stainless steel 
- Clino stainless steel with Clino Connect 
- Aluminium with Clino Connect 
- Stainless steel wire with Clino Connect 
- Inverse with Clino Connect 
- Additional mop frames 



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## PPSC MicroTec



Art. No.: 2700531

- +
- +
- +
- +
- +

**Types of floors** All water-resistant hard floor coverings, anti-slip flooring

**Working material** High-tech microfibers 100% PES with PA bristle

**Equipment** Loop made from TEC polyester, with cover, including belt pocket extremely tear-resistant, with backfilling

**Weight** 130 g

**Dimensions** 40 cm

**Packaging** Pre-washed, 50 parts in a carton  
Also deliverable in smaller quantities



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## MicroSicuro Plus



Art. No.: 2700535

- +
- +
- +
- +

**Types of floors** All water-resistant hard floor coverings, anti-slip flooring

**Working material** High-tech microfibers 100% PES with PA bristle

**Equipment** Loop made from TEC polyester, with cover, with belt pocket extremely tear-resistant, with backfilling

**Weight** 130 g

**Dimensions** 40 cm

**Packaging** Pre-washed, 50 parts in a carton  
Also deliverable in smaller quantities





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## MicroMopp Plus

Art. No.: 2700530

- ⊕ Wet and moist cleaning in single-stage technique
- ⊕ Dry cleaning, sealed parquet floors, laminate
- ⊕ With special loop for excellent dirt pick-up

**Types of floors** For all smooth hard floors  
**Working material** High-tech microfibers 100% PES  
**Equipment** Loop made from TEC polyester, with cover, with belt pocket extremely tear-resistant, with backfilling

**Weight** 130 g  
**Dimensions** 40 cm  
**Packaging** Pre-washed, 50 parts per carton  
 Also deliverable in smaller quantities



Art.-Nr. 2700202 MicroMopp  
 same as MicroMopp Plus without loop  
 Weight: 120 g



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## MicroSicuro

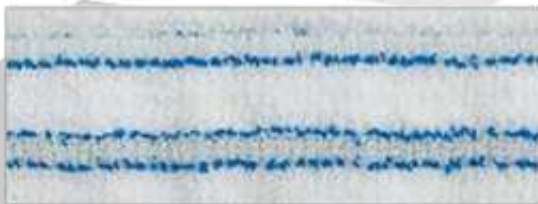


Art. No.: 2700246

- ⊕ Excellent cleaning performance
- ⊕ Germ-reducing effect, same as PPSC MicroTec
- ⊕ For all smooth and structured hard floors, for slip-resistant tiles

**Types of floors** All smooth hard floors  
**Working material** High-tech microfibers 100% PES with PA bristle  
**Equipment** with cover, with belt pocket extremely tear-resistant, with backfilling

**Weight** 130 g  
**Dimensions** 40 cm  
**Packaging** Pre-washed, 50 parts per carton  
 Also deliverable in smaller quantities





1/2



## King

Art. No.: 2140020

- ⊕ Maximum surface capacity, excellent dirt pick-up capability
- ⊕ The reference product in one- and two-step technique
- ⊕ The best tuft quality, ready to use, pre-washed

<b>Types of floors</b>	All water-resistant hard floors
<b>Working material</b>	Synthetic/Viscose yarn (50/50)
<b>Equipment</b>	with cover, with PVC pocket, Double sealing of the pocket seam
<b>Weight</b>	150 g
<b>Dimensions</b>	40 cm
<b>Packaging</b>	Pre-washed, 100 parts per carton Also deliverable in smaller quantities



1/2



## MicroKing

Art. No.: 2140080

- ⊕ Characteristics as Mopp King
- ⊕ Maximal dirt pick-up capability
- ⊕ Maximal cleaning performance through additional rows of microfibers
- ⊕ Ready to use, pre-washed

<b>Types of floors</b>	All water-resistant hard floors
<b>Working material</b>	Synthetic/Viscose yarn (50/50) with additional rows of microfibers
<b>Equipment</b>	with cover, with PVC pocket, Double sealing of the pocket seam
<b>Weight</b>	150 g
<b>Dimensions</b>	40 cm
<b>Packaging</b>	Pre-washed, 100 parts per carton Also deliverable in smaller quantities



## Mop frames and handles

All PPS mop frames are available with a stainless steel handle reception as well as the Clino Connect quick change system (without clamping) and Clino Connect Lock (with clamping) [▶ pp. 34](#)



### Mop frames/Handles

Article No. Description

		<p><b>Clino CR stainless steel mop frame</b></p> <p>All mop frames are also available with stainless steel handle reception</p> <p>2009050 Clino CR stainless steel mop frame</p>
		<p><b>Clino CR stainless steel mop frame</b></p> <p>Robust and durable through stainless steel</p> <ul style="list-style-type: none"> <li>• Autoclavable</li> <li>• Contactless release of the mop with MopDrop <a href="#">▶ pp. 36</a></li> </ul> <p>2009060 Clino CR stainless steel mop frame with Clino Connect</p> <p>2009061 Clino CR stainless steel mop frame with Clino Connect Lock</p>
		<p><b>Aluminium mop frame</b></p> <p>Weight-saving through aluminium</p> <ul style="list-style-type: none"> <li>• Mechanism made of stainless steel, aluminium plate, autoclavable</li> <li>• Contactless release of the mop with MopDrop</li> </ul> <p>2009160 Aluminium mop frame with Clino Connect</p> <p>2009161 Aluminium mop frame with Clino Connect Lock</p> <p>2009100 Aluminium mop frame with stainless steel handle reception</p>
		<p><b>Stainless steel wire mop frame</b></p> <p>Very low weight</p> <ul style="list-style-type: none"> <li>• Autoclavable</li> <li>• Contactless release of the mop with MopDrop</li> </ul> <p>2009560 Stainless steel wire mop frame with Clino Connect</p> <p>2009561 Stainless steel wire mop frame with Clino Connect Lock</p> <p>2009500 Stainless steel wire mop frame with stainless steel handle reception</p>
		<p><b>Stainless steel inverse mop frame</b></p> <p>In particular for single-use mop</p> <ul style="list-style-type: none"> <li>• Autoclavable</li> <li>• Stainless steel plate on the bottom</li> <li>• Not suitable for flat wringer</li> </ul> <p>2009460 Stainless steel inverse mop frame with Clino Connect</p> <p>2009461 Stainless steel inverse mop frame with Clino Connect Lock</p> <p>2009470 Stainless steel inverse mop frame with stainless steel handle reception</p>
		<p><b>Stainless steel wall cleaning unit</b></p> <p>For wall and ceiling cleaning</p> <ul style="list-style-type: none"> <li>• Made entirely of stainless steel, autoclavable</li> <li>• With locking screw</li> <li>• With stainless steel handle reception</li> </ul> <p>3580039 Stainless steel wall cleaning unit</p>
		<p><b>One-piece mop frame GMP</b></p> <p>Hygienic safety through 100 % stainless steel</p> <ul style="list-style-type: none"> <li>• Handle and handle reception made from a single piece</li> <li>• Smooth finishing</li> <li>• Autoclavable</li> <li>• Total length: 1.6 m</li> </ul> <p>3500902 Stainless steel mop frame with stainless steel handle, one-piece GMP conform</p> <p>3500919 Stainless steel mop frame with inverse, one-piece GMP conform</p>





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**Mop frame Clino Ergo EM**

Perfect functionality with minimal weight, autoclavable

- Hygienic design: Entirely enclosed areas
- High loading capacity through innovative material
- Very low weight: Ideal for wall and ceiling cleaning

2520150 Clino Ergo EM mop frame with Clino Connect

2520151 Clino Ergo EM mop frame with Clino Connect Lock



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**Mop frame Clino Ergo FP**

• Hygienic design: Entirely enclosed areas, autoclavable

- High loading capacity through innovative material
- Very low weight: Also ideal for ceilings and walls
- Suitable for flat wringer Ringo and Ringo GMP

2520100 Mop frame Clino Ergo FP



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**Trapez mop frame with Clino Connect**

Ideal for cleaning hard-to-reach areas

- Trapezoidal 22/27 cm, autoclavable
- Very low weight: Also ideal for ceilings and walls
- Available in stainless steel and in plastic design

2009580 Trapez stainless steel mop frame with Clino Connect Lock

2520300 Trapez plastic mop frame with Clino Connect Lock  [cg\\_99](#)



**Stainless steel telescopic handle, autoclavable**

Suitable for

2016115 Stainless steel telescopic handle, 1.0 to 1.8 m with tilting lever

all PPS mop frames

2016120 Stainless steel telescopic handle, 1.0 to 1.8 m with tilting lever, sleeve and quick closing mechanism for ClinoConnect and ClinoConnect Lock

2016110 Stainless steel telescopic handle, 0.7 to 1.2 m with tilting lever

2016112 Stainless steel telescopic handle, 0.7 to 1.2 m with tilting lever, sleeve and quick closing mechanism for ClinoConnect and ClinoConnect Lock



**Aluminium telescopic handle**

Suitable for all PPS mop frames

- Autoclavable

3516050 Aluminium telescopic handle, 1.0 to 1.8 m with tilting lever, white

3516051 Aluminium telescopic handle, 1.0 to 1.8 m with tilting lever, white, with sleeve and quick closing mechanism for Clino Connect and Clino Connect Lock



**Aluminium telescopic handle, short**

Suitable for all PPS mop frames

- Autoclavable

3516055 Aluminium telescopic handle, 0.7 to 1.2 m with tilting lever, white

3516056 Aluminium telescopic handle, 0.7 to 1.2 m with tilting lever, white, with sleeve and quick closing mechanism for ClinoConnect and ClinoConnect Lock



**Aluminium handle**

Suitable for all PPS mop frames

- Autoclavable

3516060 Aluminium handle 30 cm, white

3516080 Aluminium handle 50 cm, white

3516070 Aluminium handle 70 cm, white

3516090 Aluminium handle 1.4 m, white

3516062 Aluminium handle 30 cm, white\*







3516082 Aluminium handle 50 cm, white\*

3516072 Aluminium handle 70 cm, white\*

3516092 Aluminium handle 1.4 m, white\*

\* with quick closing mechanism for Clino Connect and Clino Connect Lock

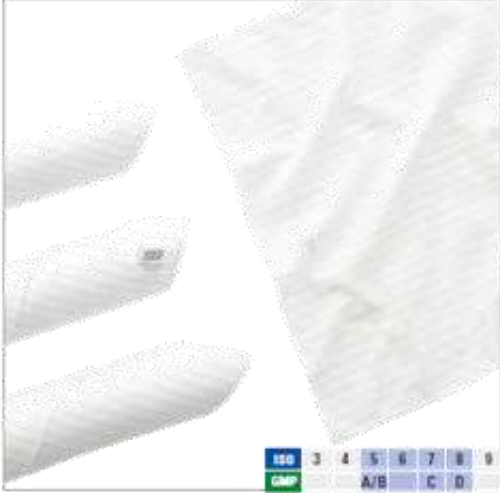
Article No.	Description   Characteristics	Application information
	<p>2009580 <b>Trapez stainless steel holder for surface cleaning with Clino Connect Lock</b></p> <p>3516062 Aluminium handle 30 cm</p> <p>3516082 Aluminium handle 50 cm</p> <p>Suitable for all handles with Clino Connect Lock <a href="#">▶ pg. 95</a></p>	<ul style="list-style-type: none"> <li>• For surface cleaning</li> <li>• For isolator cleaning</li> <li>• For wall and ceiling cleaning</li> <li>• Autoclavable</li> </ul>
	<p>2520300 <b>Trapez plastic holder for surface cleaning with Clino Connect Lock</b></p> <p>3516062 Aluminium handle 30 cm</p> <p>3516082 Aluminium handle 50 cm</p> <p>Suitable for all handles with Clino Connect Lock <a href="#">▶ pg. 95</a></p>	<ul style="list-style-type: none"> <li>• For surface cleaning</li> <li>• For isolator cleaning</li> <li>• For wall and ceiling cleaning</li> <li>• Autoclavable</li> </ul>
	<p>2700293 <b>Mop MicroSicuro Trapez CR/A for surface cleaning</b></p> <p><a href="#">▶ pg. 85</a></p>	<ul style="list-style-type: none"> <li>• For Trapez stainless steel (2009580) and plastic (2520300) holders</li> <li>• Autoclavable</li> <li>• For isolator cleaning</li> </ul>
	<p>3580010 <b>Stainless steel squeegee 25 cm</b></p> <p>3580011 <b>Rubber lip replacement 25 cm</b></p> <p>3580012 <b>Stainless steel squeegee 35 cm</b></p> <p>3580013 <b>Rubber lip replacement 35 cm</b></p>	<ul style="list-style-type: none"> <li>• For glass cleaning</li> <li>• Autoclavable</li> </ul>
	<p>2700603 <b>Flexible holder</b> also available with telescopic handle</p> <p>2700602 <b>Mop MicroSicuro</b> for flexible holder</p>	<ul style="list-style-type: none"> <li>• Cannot be autoclaved</li> <li>• For grey areas</li> </ul>
	<p>3590100 <b>Broom for hygienically sensitive areas</b></p> <p>Material: Body: PP setting: PBT</p> <p>Dimensions (LxWxH): 300 x 70 x 120 mm</p>	
	<p>3590200 <b>Handle for hygienically sensitive areas, L 1.45 m</b></p> <p>Material: Anodised aluminium pipe</p> <p>3590210 <b>Telescopic handle for hygienically sensitive areas, L 2.2 - 4.0 m</b></p> <p>Material: Anodised aluminium pipe</p>	

Article No.	Description   Characteristics	Application information
	<b>3590300 Hand broom with run direction for hygienically sensitive areas</b> Material: Body: PP, setting: PBT Dimensions (LxWxH): 310 x 40 x 90 mm	<ul style="list-style-type: none"> <li>• Setting height 45 mm</li> <li>• unslotted fibre ends</li> <li>• hard bristle material</li> <li>• white</li> </ul>
	<b>3590400 Dustpan for hygienically sensitive areas</b> Material: Stainless steel Dimensions (LxWxH): 400 x 220 x 55 mm	<ul style="list-style-type: none"> <li>• Made entirely of stainless steel</li> <li>• autoclavable</li> </ul>
	<b>3590500 Handle brush for hygienically sensitive areas</b> Material: Body: PP setting: PBT Dimensions (LxWxH): 400 x 48 x 70 mm	<ul style="list-style-type: none"> <li>• Setting height 35 mm</li> <li>• unslotted fibre ends</li> <li>• hard bristle material</li> <li>• white</li> </ul>
	<b>3590510 Joint scrubber for hygienically sensitive areas</b> Material: Body: PP setting: PBT Dimensions: L 490 mm	<ul style="list-style-type: none"> <li>• Setting height 45 mm</li> <li>• unslotted fibre ends</li> <li>• medium-hard bristle material</li> <li>• white</li> </ul>
	<b>3590600 Joint brush for hygienically sensitive areas</b> Material: Body: PP setting: PBT Dimensions (LxWxH): 410 x 50 x 40 mm	<ul style="list-style-type: none"> <li>• Setting height 42 mm</li> <li>• sharpened fibre ends</li> <li>• medium-hard bristle material</li> <li>• white</li> </ul>
	<b>3400715 Squeegee white</b> Material: Body: PP Lip: TPE Dimensions: 56 cm	Suitable for handle <ul style="list-style-type: none"> <li>• 3590200</li> <li>• 3590210 Telescopic handle</li> </ul>

► pg. 99



## Clino® CR wiper programme



1

A

### Clino® Carbon

Electrostatically derivable wiper

Art. No.: 3600095

Art. No.: 3600098

- Reusable wiper
- Electrostatically derivable
- Autoclavable
- Low particle emission

**Surfaces** For all smooth, water-resistant surfaces

**Material** Polyester/carbon, with linking seam

**Dimensions** Art. No.: 3600095: 26 x 26 cm  
Art. No.: 3600098: 35 x 34 cm

**Weight** Art. No.: 3600095: 10 g  
Art. No.: 3600098: 16 g

**Packaging** Packaging Unit: 5 parts  
Also deliverable in smaller quantities



1

A

### Clino® Ultra CR

For all smooth surfaces

Art. No.: 2660005

Art. No.: 2660006

- Reusable wiper, autoclavable
- >99% reduction of germs due to bacterium, yeast and mildew through use of PPSC textiles achieved when using only ionised water (Test method DGMH 2001 Standard method 14)

**Surfaces** For all non-structured surfaces

**Material** Polyester/polyamide (80/20) with linking seam

**Dimensions** Art. No.: 2660005: 31 x 38 cm  
Art. No.: 2660006: 60 x 60 cm

**Weight** Art. No.: 2660005: 28 g  
Art. No.: 2660006: 70 g

**Packaging** Packaging Unit: 5 parts  
Also deliverable in smaller quantities



1

A

### Clino® glass wiper

The very fine super microfiber enables the streak-free cleaning of all smooth surfaces

Art. No.: 2650002 – blue

Art. No.: 2650004 – green

- Reusable wiper
- non-sterile

**Surfaces** For all very smooth surfaces such as glass, mirrors, etc.

**Material** Polyester/polyamide (80/20), with linking seam

**Dimensions** 40 x 38 cm

**Weight** 48 g

**Packaging** Packaging Unit: 50 parts, 5 PU per carton  
Also deliverable in smaller quantities



1

## Clino® One Way Professional

Single-use wiper for the cleanroom

Art. No.: 3600085

- High absorption rate
- Low particle emission
- Washed and packaged in cleanroom class 10

Surfaces	All smooth surfaces
Material	100 % polyester, outstanding durability due to double-knitted structural design with heat cut edges
Dimensions	23 x 23 cm
Weight	6 g
Packaging	PU: 1 package with 150 parts, 1 carton contains 8 PU



1

## Clino® One Way Premium

Single-use wiper for the cleanroom

Art. No.: 3600093

- High-dense stitching
- Low particle emission
- Washed and packaged in cleanroom class 10

Surfaces	All smooth surfaces
Material	100 % microfiber, knitted structural form with ultrasonically sealed edges
Dimensions	30 x 30 cm
Weight	27 g/wiper
Packaging	PU: 50 parts, 1 carton contains 5 PU



1

## Clino® One Way

Single-use wiper for the cleanroom

Art. No.: 3600070

- Excellent absorption capacity
- High abrasion resistance
- Low release of particles and fibres

Surfaces	All smooth surfaces in the semiconductor and pharmaceutical industries
Material	nonwoven, cellulose/polyester
Dimensions	23 x 23 cm
Weight	3 g/wiper
Packaging	PU: 1 package with 300 parts, 1 carton contains 8 PU



Clino Connect in connection with CR4  
Assemble your own individual mop carrier system and quickly  
and easily change the mop carrier with the Clino Connect  
connection system ▶ pp. 34, 94



# GLOVES



## Simtec Latex 300 mm

- class 100/ISO 5
- ambidextrous
- powder free, natural
- EN 455

unit: 10 bags/100 pieces

art.no. 337030 – size S  
art.no. 337031 – size M  
art.no. 337032 – size L  
art.no. 337033 – size XL  
art.no. 337034 – size XXL



## Riverstone Latex 290 mm

- class 100/ISO 5
- ambidextrous
- powder free, natural
- EN 455

Also available in class 10/ISO 4  
unit: 10 bags/100 pieces

art.no. 337530 – size S  
art.no. 337531 – size M  
art.no. 337532 – size L  
art.no. 337533 – size XL  
art.no. 337534 – size XXL



## Ultra Latex 300 mm

- class 100/ISO 5
- hand specific
- powder free, natural
- EN 455

unit: 4 bags/50 pairs

art.no. 330180 – size 6  
art.no. 330181 – size 6,5  
art.no. 330182 – size 7  
art.no. 330183 – size 7,5  
art.no. 330184 – size 8  
art.no. 330185 – size 8,5  
art.no. 330186 – size 9  
art.no. 330187 – size 10



## Latex Sterile 300 mm

- class 100/ISO 5
- hand specific
- powder free, natural
- EN 455

unit: 4 bags/50 pairs

art.no. 338600 – size 6  
art.no. 338601 – size 6,5  
art.no. 338602 – size 7  
art.no. 338603 – size 7,5  
art.no. 338604 – size 8  
art.no. 338605 – size 8,5  
art.no. 338606 – size 9  
art.no. 338607 – size 10



## Latex Sterile 400/600 mm

- class 10/ISO 4
- powder free, natural
- EN 455

length 400 mm

- ambidextrous  
unit: 20 bags/10 pairs  
art.no. 338630 – size S - XL

length 600 mm

- hand specific  
unit: 10 bags/10 pairs  
art.no. 338620 – size S - XL



## Latex Examination-Glove 245 mm

- ambidextrous
- powder free, natural
- AQL 1,5
- EN 455

unit: 10 boxes/100 pieces

art.no. 337600 – size XS  
art.no. 337601 – size S  
art.no. 337602 – size M  
art.no. 337603 – size L  
art.no. 337604 – size XL



### Simtec Nitrile 300 mm

- class 100/ISO 5
- ambidextrous
- powder free, blue
- EN 455

unit: 10 bags/100 pieces

art.no. 330500 – size S  
art.no. 330501 – size M  
art.no. 330502 – size L  
art.no. 330503 – size XL  
art.no. 330504 – size XXL



### Riverstone Nitrile 290 mm

- class 10/ISO 4
- ambidextrous
- powder free, white
- EN 455

unit: 10 bags/100 pieces

art.no. 330520 – size S  
art.no. 330521 – size M  
art.no. 330522 – size L  
art.no. 330523 – size XL  
art.no. 330524 – size XXL



### OPT-XP Nitrile 300 mm

- ambidextrous
- powder free, purple
- EN420/EN 374 – cat. III

unit: 10 boxes/100 pieces

art.no. 330560 – size XS  
art.no. 330561 – size S  
art.no. 330562 – size M  
art.no. 330563 – size L  
art.no. 330564 – size XL  
art.no. 330565 – size XXL



### Nitrile Sterile 300 mm

- class 100/ISO 5
- hand specific
- powder free, white
- EN 455

unit: 4 bags/50 pairs

art.no. 330530 – size 6  
art.no. 330531 – size 6,5  
art.no. 330532 – size 7  
art.no. 330533 – size 7,5  
art.no. 330534 – size 8  
art.no. 330535 – size 8,5  
art.no. 330536 – size 9  
art.no. 330537 – size 10



### Nitrile Sterile 400/600 mm

- class 10/ISO 4
- hand specific
- powder free, white
- EN 455

#### length 400 mm

unit: 20 bags/10 pairs  
art.no. 330593 – size 6-10

#### length 600 mm

unit: 10 bags/10 pairs  
art.no. 330594 – size 6-10



### Nitrile Examination-Glove 245 mm

- ambidextrous
- powder free, white
- AQL 1,5
- EN 455

unit: 10 boxes/100 pieces

art.no. 330610 – size XS  
art.no. 330611 – size S  
art.no. 330612 – size M  
art.no. 330613 – size L  
art.no. 330614 – size XL



### Vinyl 300 mm

- class 100/ISO 5
- ambidextrous
- powder free, natural
- EN 455

unit: 10 bags/100 pieces

art.no. 330200 – size S  
art.no. 330201 – size M  
art.no. 330202 – size L  
art.no. 330203 – size XL



### Vinyl Examination-Glove 245 mm

- ambidextrous
- powder free, natural
- EN 455

unit: 10 boxes/100 pieces

art.no. 330251 – size S  
art.no. 330252 – size M  
art.no. 330253 – size L  
art.no. 330254 – size XL



### PU Dailove H4

- ambidextrous
- powder free, black
- antistatic  $10^3/10^6 \Omega$
- EN 455

unit: 5 pairs

art.no. 330145 – size S  
art.no. 330146 – size M  
art.no. 330147 – size L



### HK-11

- back of hand polyester
- palm: Kevlar
- antistatic
- heat-resistant up to 250°C
- length 240-270 mm

unit: 1 pair

art.no. 336020 – size S  
art.no. 336021 – size L  
art.no. 336022 – size XL



### HK-12

- back of hand and palm: Kevlar
- antistatic
- heat-resistant up to 250°C
- length 250-260 mm

unit: 1 pair

art.no. 336025 – size L  
art.no. 336026 – size XL



### TG-16

- back of hand with Beltron fibre every 5 mm
- palm: Twaron fibre
- antistatic
- heat-resistant up to 280°C
- length 280 mm

unit: 1 pair

art.no. 336030 – size L  
art.no. 336031 – size XL  
art.no. 336032 – size XXL





**Cut-Resistant Glove  
Palm Fit 5400**

- high performance polyethylene (HPPE)
- polyurethane coated palm
- white
- hand specific
- EN 388 – cat. II
- cut 2

unit: 20 bags/10 pairs

art.no. 330076 – size M  
art.no. 330077 – size L  
art.no. 330078 – size XL



**Assembly Grip Lite 265**

- nylon seamless knit
- thin nitrile coated palm
- light blue
- hand specific
- EN 388 – cat. II

unit: 12 bags/10 pairs

art.no. 330040 – size S  
art.no. 330041 – size M  
art.no. 330042 – size L  
art.no. 330043 – size XL



**Inner Glove B0900**

- nylon seamless knit
- white
- ambidextrous
- EN 388 – cat. I

unit: 20 bags/10 pairs

art.no. 330012 – size S-L  
art.no. 330015 – size XL



**Top Fit B0600**

- nylon seamless knit
- polyurethane coated fingertips
- white
- hand specific
- EN 388 – cat. II

unit: 24 bags/10 pairs

art.no. 330090 – size S  
art.no. 330091 – size M  
art.no. 330092 – size L  
art.no. 330093 – size XL



**Palm Fit B0500**

- nylon seamless knit
- polyurethane coated palm
- white
- hand specific
- EN 388 – cat. II

unit: 24 bags/10 pairs

art.no. 330004 – size S  
art.no. 330005 – size M  
art.no. 330006 – size L  
art.no. 330007 – size XL



**Fit B0610**

- nylon seamless knit
- white
- ambidextrous
- EN 388 – cat. I

unit: 24 bags/10 pairs

art.no. 330008 – size S  
art.no. 330009 – size M  
art.no. 330010 – size L  
art.no. 330011 – size XL



### Top Fit A0160

- nylon/acryl seamless knit
- surface resistance  $10^5/10^7 \Omega$
- polyurethane coated fingertips
- hand specific
- EN 388 – cat. II

unit: 24 bags/10 pairs

art.no. 330400 – size S  
art.no. 330401 – size M  
art.no. 330402 – size L  
art.no. 330403 – size XL



### Palm Fit A0170

- nylon/acryl seamless knit
- surface resistance  $10^5/10^7 \Omega$
- polyurethane coated palm
- hand specific
- EN 388 – cat. II

unit: 24 bags/10 pairs

art.no. 330405 – size S  
art.no. 330406 – size M  
art.no. 330407 – size L  
art.no. 330408 – size XL



### Fit A0150

- nylon/acryl seamless knit
- surface resistance  $10^5/10^7 \Omega$
- hand specific
- EN 388 – cat. II

unit: 24 bags/10 pairs

art.no. 330410 – size S  
art.no. 330411 – size M  
art.no. 330412 – size L  
art.no. 330413 – size XL



### Han-Top

- nylon seamless knit
- polyurethane coated fingertips
- white
- hand specific
- EN 388 – cat. I

unit: 24 bags/10 pairs

art.no. 330045 – size S  
art.no. 330046 – size M  
art.no. 330047 – size L  
art.no. 330048 – size XL  
art.no. 330049 – size XXL



### Han-Palm

- nylon seamless knit
- polyurethane coated palm
- white
- hand specific
- EN 388 – cat. II

unit: 24 bags/10 pairs

art.no. 330020 – size S  
art.no. 330021 – size M  
art.no. 330022 – size L  
art.no. 330023 – size XL  
art.no. 330024 – size XXL



### Han-Fit

- nylon seamless knit
- white
- ambidextrous
- EN 388 – cat. I

unit: 24 bags/10 pairs

art.no. 330030 – size S  
art.no. 330031 – size M  
art.no. 330032 – size L  
art.no. 330033 – size XL  
art.no. 330034 – size XXL



### Ampere

- 80% nylon/20% copper seamless knit
- surface resistance  $10^7 \Omega$
- polyurethane coated fingertips
- hand specific
- EN 388 – cat. II

unit: 24 bags/10 pairs

art.no. 330105 – size S  
art.no. 330106 – size M  
art.no. 330107 – size L  
art.no. 330108 – size XL  
art.no. 330109 – size XXL



### Volt

- 80% nylon/20% acryl seamless knit
- surface resistance  $10^7 \Omega$
- polyurethane coated palm
- hand specific
- EN 388 – cat. II

unit: 24 bags/10 pairs

art.no. 330155 – size S  
art.no. 330156 – size M  
art.no. 330157 – size L  
art.no. 330158 – size XL  
art.no. 330159 – size XXL



### Edison

- 80% nylon/20% acryl seamless knit
- surface resistance  $10^7 \Omega$
- hand specific
- EN 388 – cat. I

unit: 24 bags/10 pairs

art.no. 330100 – size S  
art.no. 330101 – size M  
art.no. 330102 – size L  
art.no. 330103 – size XL  
art.no. 330104 – size XXL



### Yuko

- back and palm: polyester with carbon fibre every 10 mm
- hand specific – length 280 mm
- EN 388

unit: 24 bags/10 pairs

art.no. 335200 – size S  
art.no. 335201 – size M  
art.no. 335202 – size L  
art.no. 335203 – size XL



### Yukari

- back and palm: polyester with carbon fibre every 5 mm
- hand specific – length 280 mm
- EN 388

unit: 24 bags/10 pairs

art.no. 335160 – size S  
art.no. 335161 – size M  
art.no. 335162 – size L  
art.no. 335163 – size XL



### Mika

- back: polyester with carbon fibre every 10 mm
- palm: cotton with carbon fibre every 5 mm and PVC-dots
- hand specific – length 280 mm
- EN 388

unit: 24 bags/10 pairs

art.no. 335240 – size S  
art.no. 335241 – size M  
art.no. 335242 – size L  
art.no. 335243 – size XL





### Kazuyo

- back: polyester with carbon fibre every 10 mm
- palm: cotton with carbon fibre every 5 mm and PVC-dots
- hand specific – length 280 mm
- knitted cuffs
- EN 388

unit: 24 bags/10 pairs

art.no. 335250 – size S  
art.no. 335251 – size M  
art.no. 335252 – size L  
art.no. 335253 – size XL



### Megumi

- back: polyester with carbon fibre every 10 mm
- palm: polyester with polyurethane coating
- hand specific – length 280 mm
- EN 388

unit: 24 bags/10 pairs

art.no. 335230 – size S  
art.no. 335231 – size M  
art.no. 335232 – size L  
art.no. 335233 – size XL



### Naomi

- back: polyester with carbon fibre every 10 mm
- palm: microfibre with polyurethane coating
- hand specific – length 280 mm
- EN 388

unit: 24 bags/10 pairs

art.no. 335260 – size S  
art.no. 335261 – size M  
art.no. 335262 – size L  
art.no. 335263 – size XL



### Half-Finger Inner Glove

- nylon seamless knit
- white
- ambidextrous
- EN 388 – cat. 1

unit: 24 bags/10 pairs

art.no. 336031 P – women size  
art.no. 336031 F – men size

# GLOVES Chemical

## Trionic

An exclusive tripolymor mix that offers 100% comfort for optimal mechanical and chemical resistance.

- ✓ Excellent resistance and strong chemical protection against a great number of chemical products: exclusive Trionic formula made from a mix of natural latex, neoprene and nitrile
- ✓ Manufacturing process guarantees a very low level of contaminants: rates of particles, non-volatile residue, extractables, compatible with ISO 4 class
- ✓ Extensive range adapted to all applications: wide cuff for double-gloving, extended length to protect the forearm and orange colour (518) for colour-coding

## Applications

Electronics: manufacturing integrated circuits, manufacturing semi-conductors, handling of silicon wafers in acid baths.  
Laboratories: blending, handling and transport of chemicals, handling under fume hood.

## Stansolv

The chemical protection of nitrile combined with excellent mechanical resistance.

- ✓ Manufacturing process guarantees a very low level of contaminants: rates of particles, non-volatile residue, extractables, compatible with ISO 4 class
- ✓ Optimal dexterity without compromising chemical resistance
- ✓ Better resistance than natural latex gloves against organic solvents
- ✓ Recommended for people sensitive to the proteins in natural latex

## Applications

All applications requiring a reduced incidence of particles and extractables, combined with resistance to solvents, abrasion and puncture: silicon handling, production of ultra-pure chemicals, solvent handling, and blending operations.

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### EN 374

Protection against bacteriological contamination.



### EN 374

Protection against chemical risks (approved according to EN.374-1: 2003 5.2.1).



### EN 388

Protection against mechanical risks.



### Trionic 517

- class 10/ISO 4
- latex/neoprene/nitrile mix
- powder free, natural
- thickness 0,50 mm
- length 360 mm
- EN 374 – cat. III

unit: 6 bags/12 pairs

art.no. 330120 – size 7  
art.no. 330121 – size 8  
art.no. 330122 – size 9  
art.no. 330123 – size 10



### Trionic 522

- class 10/ISO 4
- latex/neoprene/nitrile mix
- powder free, natural
- thickness 0,50 mm
- length 610 mm
- EN 374 – cat. III

unit: 8 bags/6 pairs

art.no. 330126 – size 8  
art.no. 330127 – size 9  
art.no. 330128 – size 10



### Stansolv 519

- class 10/ISO 4
- nitrile
- powder free, green
- thickness 0,30 mm
- length 330 mm
- EN 374 – cat. III

unit: 6 bags/12 pairs

art.no. 330430 – size 7  
art.no. 330431 – size 8  
art.no. 330432 – size 9  
art.no. 330433 – size 10



# FINGER COTS



## Latex natural

- class 100/ISO 5
- powder free, natural
- EN 455

unit: 20 bags/720 pieces

art.no. 380000 – size S  
art.no. 380001 – size M  
art.no. 380002 – size L  
art.no. 380003 – size XL



## Latex antistatic

- class 100/ISO 5
- powder free, pink
- EN 455

unit: 20 bags/720 pieces

art.no. 380005 – size S  
art.no. 380006 – size M  
art.no. 380007 – size L  
art.no. 380008 – size XL



## Latex conductive

- class 100/ISO 5
- powder free, black
- surface resistance  $10^6/10^9 \Omega$
- EN 455

unit: 20 bags/1.440 pieces

art.no. 380015 – size S  
art.no. 380016 – size M  
art.no. 380017 – size L  
art.no. 380018 – size XL



## Nitrile

- class 100/ISO 5
- powder free, white
- EN 455

unit: 20 bags/1.440 pieces

art.no. 380040 – size S  
art.no. 380041 – size M  
art.no. 380042 – size L  
art.no. 380043 – size XL

## PVA SPONGES



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Our PVA Sponges consist of specially processed polyurethane.

Unlike an ordinary urethane sponge, our PVA Sponge has high hydrophilic property. Because pores run in all directions, a capillary effect occurs, whereby creating excellent water absorption and retention.

Once in contact with a fluid, our PVA Sponge starts absorbing the fluid at high speed, drawing it inside right before your very eyes.

When wet, our PVA Sponge is soft and elastic. Its pliant nature is suitable for washing hard disks and silicon wafers in industrial applications.



### E-1

- condition: dry
- pore size 130µ
- size 230 x 230 x 2 mm

unit: 40 bags/10 pieces

art.no. 361000

### E-2

- condition: dry
- pore size 130µ
- size 230 x 230 x 2 mm

unit: 40 bags/5 pieces

art.no. 361002



### D-2

- condition: dry
- pore size 80µ
- size 230 x 230 x 2 mm

unit: 40 bags/5 pieces

art.no. 361003



### D-3

- condition: wet
- pore size 80µ
- size 125 x 85 x 35 mm

unit: 75 pieces

art.no. 361004

## MICROFIBER

<b>Vipers MF100</b> SIZE: 23 X 23 CM	<b>Vipers MF200</b> SIZE: 23 X 23 CM	<b>Vipers MF240</b> SIZE: 23 X 23 CM
<ul style="list-style-type: none"> <li>➤ Material: polyester / nylon (microfibre)</li> <li>➤ Weight: 100 g / m<sup>2</sup></li> <li>➤ Edge cut: Laser-sealed</li> <li>➤ Application: Cleanroom class ISO 4</li> <li>➤ Packing: 100 pieces per bag</li> </ul>	<ul style="list-style-type: none"> <li>➤ Material: polyester / nylon (microfibre)</li> <li>➤ Weight: 197 g / m<sup>2</sup></li> <li>➤ Edge cut: Ultrasonic sealed</li> <li>➤ Application: Cleanroom class ISO 3</li> <li>➤ Packing: 100 pieces per bag</li> </ul>	<ul style="list-style-type: none"> <li>➤ Material: polyester / nylon (microfibre)</li> <li>➤ Weight: 240 g / m<sup>2</sup></li> <li>➤ Edge cut: Laser-sealed</li> <li>➤ Application: Cleanroom class ISO 4</li> <li>➤ Packing: 50 pieces per bag</li> </ul>

## POLYESTER

<b>Vipers P115</b> SIZE: 23 X 23 CM	<b>Vipers P160</b> SIZE: 23 X 23 CM	<b>Vipers PQ240</b> SIZE: 23 X 23 CM
<ul style="list-style-type: none"> <li>➤ Material: 100% polyester</li> <li>➤ Weight: 115 g / m<sup>2</sup></li> <li>➤ Edge cut: Laser-sealed</li> <li>➤ Application: Cleanroom class ISO 5</li> <li>➤ Packing: 150 pieces per bag</li> </ul>	<ul style="list-style-type: none"> <li>➤ Material: 100% polyester</li> <li>➤ Weight: 135 g / m<sup>2</sup></li> <li>➤ Edge cut: Laser-sealed</li> <li>➤ Application: Cleanroom class ISO 5</li> <li>➤ Packing: 150 pieces per bag</li> </ul>	<ul style="list-style-type: none"> <li>➤ Material: 100% polyester</li> <li>➤ Weight: 240 g / m<sup>2</sup></li> <li>➤ Edge cut: Laser-sealed</li> <li>➤ Application: Cleanroom class ISO 5</li> <li>➤ Packing: 100 pieces per bag</li> </ul>

<b>Vipers P140</b> SIZE: 10 X 10 CM	<b>Vipers P140L</b> SIZE: 58 X 23 CM
<ul style="list-style-type: none"> <li>➤ Material: 100% polyester</li> <li>➤ Weight: 140 g / m<sup>2</sup></li> <li>➤ Edge cut: Ultrasonic sealed</li> <li>➤ Application: Cleanroom class ISO 5</li> <li>➤ Packing: 600 pieces per bag</li> </ul>	<ul style="list-style-type: none"> <li>➤ Material: 100% polyester</li> <li>➤ Weight: 140 g / m<sup>2</sup></li> <li>➤ Edge cut: Laser-sealed</li> <li>➤ Application: Cleanroom class ISO 5</li> <li>➤ Packing: 150 pieces per bag</li> </ul>

## STERILE POLYESTER



<b>Vipers SP115 sterile</b> SIZE: 23 X 23 CM	<b>Vipers SP140 sterile</b> SIZE: 23 X 23 CM
<ul style="list-style-type: none"> <li>➤ Material: 100% polyester</li> <li>➤ Weight: 115 g / m<sup>2</sup></li> <li>➤ Edge cut: Laser-sealed</li> <li>➤ Application: GMP A / B</li> <li>➤ Pack of 5 bags of 10 cloths</li> </ul>	<ul style="list-style-type: none"> <li>➤ Material: 100% polyester</li> <li>➤ Weight: 140 g / m<sup>2</sup></li> <li>➤ Edge cut: Laser-sealed</li> <li>➤ Application: Cleanroom class ISO 5</li> <li>➤ Pack of 10 bags of 10 cloths</li> </ul>

## POLYESTER CELLULOSE

<b>Vipers PC68</b> SIZE: 23 X 23 CM	<b>Vipers PC68 Premium</b> SIZE: 23 X 23 CM
<ul style="list-style-type: none"> <li>➤ Material: 45% polyester / 55% cellulose</li> <li>➤ Weight: 68 g / m<sup>2</sup></li> <li>➤ Edge cut: Laser-sealed</li> <li>➤ Application: Cleanroom class ISO 6</li> <li>➤ Packing unit: 300 pieces per bag</li> </ul>	<ul style="list-style-type: none"> <li>➤ Material: 45% polyester / 55% cellulose</li> <li>➤ Weight: 68 g / m<sup>2</sup></li> <li>➤ Edge cut: Laser-sealed</li> <li>➤ Application: Cleanroom class ISO 6</li> <li>➤ Packing unit: 300 pieces per bag</li> </ul>

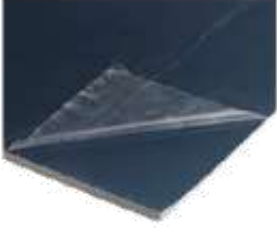
## STERILE POLYESTER CELLULOSE

<b>Vipers SPC68 sterile</b> SIZE: 23 X 23 CM	<b>Vipers SPC68 sterile</b> SIZE: 23 X 23 CM
<ul style="list-style-type: none"> <li>➤ Material: 45% polyester / 55% cellulose</li> <li>➤ Weight: 68 g / m<sup>2</sup></li> <li>➤ Edge cut: Laser-sealed</li> <li>➤ Application: Cleanroom class ISO 6</li> <li>➤ Packing unit: 50 pieces per bag</li> </ul>	<ul style="list-style-type: none"> <li>➤ Material: 45% polyester / 55% cellulose</li> <li>➤ Weight: 68 g / m<sup>2</sup></li> <li>➤ Edge cut: Laser-sealed</li> <li>➤ Application: GMP A/B</li> <li>➤ Packing unit: 5 bags of 20 wipes</li> </ul>

## Pre-SATURATED

<b>Vipers StarSat VSPC68</b> <b>sterile</b> <b>23 X 23 CM</b>	<b>Vipers StarSat VSPP36</b> <b>sterile</b> <b>23 X 28 CM</b>
<ul style="list-style-type: none"><li>➤ 55% cellulose / 45% polyester</li><li>➤ Weight: 68 g / m<sup>2</sup></li><li>➤ Edge cut: Laser-sealed</li><li>➤ Application: GMP A / B</li><li>➤ Pack of 24 bags of 50 wipes</li></ul>	<ul style="list-style-type: none"><li>➤ 100% meltblown polypropylene</li><li>➤ Weight: 36 g / m<sup>2</sup></li><li>➤ Edge cut: Laser-sealed</li><li>➤ Application: GMP A / B</li><li>➤ Pack of 20 bags of 30 wipes</li></ul>
<b>Vipers StarSat VPC68</b> <b>23 X 23 CM</b>	<b>Vipers StarSat VPP36</b> <b>23 X 28 CM</b>
<ul style="list-style-type: none"><li>➤ 55% cellulose / 45% polyester</li><li>➤ Weight: 68 g / m<sup>2</sup></li><li>➤ Edge cut: Laser-sealed</li><li>➤ Application: Cleanroom class ISO 5</li><li>➤ Pack of 24 bags of 50 wipes</li></ul>	<ul style="list-style-type: none"><li>➤ 100% meltblown polypropylene</li><li>➤ Weight: 36 g / m<sup>2</sup></li><li>➤ Edge cut: Laser-sealed</li><li>➤ Application: GMP A / B</li><li>➤ Pack of 20 bags of 30 wipes</li></ul>

# MATS



## Permanent Mats

- permanent tackiness
- SBM – thickness 3mm or 6 mm
- dark-blue

120 x 60 cm x 3 mm  
art.no. 350180

100 x 100 cm x 3 mm  
art.no. 350182

120 x 60 cm x 6 mm  
art.no. 350181

100 x 100 cm x 6 mm  
art.no. 350183



## Adhesive Mats white

- standard tackiness
- PVC
- 30 layers

unit: carton/4 mats

45 x 114 cm  
art.no. 350102  
66 x 114 cm  
art.no. 350100



## Adhesive Mats white

- high tackiness
- PVC
- 30 layers
- 66 x 114 cm

unit: carton/4 mats

art.no. 350101



## Adhesive Mats blue

- standard tackiness
- PVC
- 30 layers
- 66 x 114 cm

unit: carton/4 mats

art.no. 350103



## ESD-Adhesive Mats white

- standard tackiness
- surface resistance  
10<sup>4</sup>-10<sup>7</sup> Ω
- polyethilene film 0.045 mm
- waterborne acrylic adhesive
- RoHS-comform
- 30 layers
- 66 x 114 cm

unit: carton/4 mats

art.no. 350110



# SWABS Cotton



**Huby-340 CA-003**  
tip: double  $\varnothing$  5,00 x 13,00 mm  
handle: pressed cotton  $\varnothing$  2,46 x 73,00 mm

art.no. 360007 unit: 1.250 pieces



**Huby-340 CA-006**  
tip: single  $\varnothing$  4,60 x 16,00 mm  
handle: wood  $\varnothing$  2,20 x 148,00 mm

art.no. 360015 unit: 1.000 pieces



**Huby-340 CA-008**  
tip: double  $\varnothing$  5,00 x 13,00 mm  
handle: pressed cotton  $\varnothing$  2,46 x 146,00 mm

art.no. 360012 unit: 20 bags/1.000 pieces



**Huby-340 CA-005**  
tip: single  $\varnothing$  2,30 x 16,00 mm  
handle: pressed cotton  $\varnothing$  1,52 x 146,00 mm

art.no. 360010 unit: 20 bags/2.500 pieces

# Polyester



**PS 3910**  
class 10/ISO 4  
tip: polyester 7,50/ 3,00/ 16,00 mm (W/T/U)  
handle: polypropylene 3,20/148,00/164,00 mm (W/T/O)  
10 x 10<sup>6</sup>Ω

art.no. 360910 unit: 10 x 500 pieces



**PS 3911**  
class 10/ISO 4  
tip: polyester 13,00/ 3,00/ 24,00 mm (W/T/U)  
handle: polypropylene 5,20/97,00/121,00 mm (W/T/O)  
10 x 10<sup>6</sup>Ω

art.no. 360911 unit: 50 x 100 pieces



**PS 3912**  
class 10/ISO 4  
tip: polyester 9,20/ 3,20/19,00 mm (W/T/U)  
handle: polypropylene 3,20/60,00/70,00 mm (W/T/O)  
10 x 10<sup>6</sup>Ω

art.no. 360912 unit: 50 x 500 pieces



**PS 3605**  
tip: polyester 5,15/ - / 19,82 mm (W/T/U)  
handle: polypropylene 3,17/ - /132,28 mm (W/T/O)

art.no. 360021 unit: 10 x 100 pieces

## Polyurethan



### PU 3920

class 10/ISO 4

tip: polyurethan 3,20/ 3,20/ 10,00 mm (W/T/L)  
handle: polypropylene 2,50/ 66,00/ 76,00 mm (W/T/OL)  
10 x 10<sup>9</sup>Ω

art.no. 360920

unit: 50 x 500 pieces



### PU 3921

class 10/ISO 4

tip: polyurethan 6,80/ 5,00/ 18,00 mm (W/T/L)  
handle: polypropylene 3,00/ 74,00/ 92,00 mm (W/T/OL)  
10 x 10<sup>9</sup>Ω

art.no. 360921

unit: 10 x 500 pieces



### PU 3922

class 10/ISO 4

tip: polyurethan 3,60/ 3,50/ 12,00 mm (W/T/L)  
handle: polypropylene 3,00/ 59,00/ 71,00 mm (W/T/OL)  
10 x 10<sup>9</sup>Ω

art.no. 360922

unit: 50 x 300 pieces



### PU 3923

class 10/ISO 4

tip: polyurethan 16,00/ 6,00/ 25,00 mm (W/T/L)  
handle: polypropylene 6,60/ 106,00/ 131,00 mm (W/T/OL)  
10 x 10<sup>9</sup>Ω

art.no. 360923

unit: 50 x 50 pieces



### PU 1876-PFB

tip: polyurethan 4,77/ - / 15,08 mm (W/T/L)  
handle: polypropylene 3,05/ - / 152,28 mm (W/T/OL)

art.no. 360009

unit: 2 x 500 pieces

## ESD



### 1806-PF ESD

tip: polyurethan  
10<sup>11</sup> Ω 4,70/ - / 15,80 mm (W/T/L)  
handle: polypropylene  
10<sup>11</sup> Ω 2,54/ - / 152,00 mm (W/T/OL)

art.no. 360052

unit: 20 x 50 pieces



### 1273-PF ESD

tip: polyurethan  
10<sup>11</sup> Ω 4,00/ - / 14,30 mm (W/T/L)  
handle: polypropylene  
10 x 10<sup>9</sup> Ω 2,30/ - / 67,50 mm (W/T/OL)

art.no. 360051

unit: 20 x 50 pieces



## Chemical Resistance of the Head Material

Chemicals	Material of head Polyurethan	Material of head Polyester	Material of head Cotton
Acetone	x	xx	x
Acetic Acid	xx	xx	x
Ammonia anhydrous	xx	xx	x
Aniline	x	xx	x
Benzene	x	xx	xx
Carbon Tetrachloride	x	xx	-
Chloroform	x	xx	xx
Chlorophenol	-	-	x
Chromic Acid	-	-	x
Cyclohexane	x	xx	x
Dimethylformamide	-	x	x
Dimethylsulfoxide	-	x	x
Ethylacetate	x	xx	x
Ethanol	xx	xx	x
Ethylchlorid	x	xx	x
Formic Acid	-	xx	x
Hexane	xx	xx	xx
Hydrochloric Acid 48%	-	-	x
Hydrogen Peroxide	-	xx	x
Isopropyl Alcohol	xx	xx	x
Methanol	x	xx	x
Methyl Ethyl Ketone	x	xx	x
Methylene Chloride	x	xx	x
Nitric Acid	-	-	x
Nitrobenzene	x	xx	x
Perchloroethylene	xx	xx	x
Phosphoric Acid 85 %	-	xx	x
Sulfuric Acid	-	-	-
Sodiumhydroxide 35 %	x	xx	x
Toluene	x	xx	xx
Trichloroethylene	x	xx	x
Vinyl Acetate	x	xx	x
Water	xx	xx	x
Xylene	x	xx	xx

- = no resistance, x = limited resistance, xx = high resistance



## STATIONERY



### Paper 80 g/m<sup>2</sup> DIN A4

- colour: white/light blue/green

class 100/ISO 5

unit: 10 x 250 sheets

art.no. 342000 – white  
art.no. 342001 – light blue  
art.no. 342002 – green



### Ring Notebook

- colour: white  
- book: 50 sheets/100 pages

class 100/ISO 5

unit: 1 piece  
grid DIN A4  
art.no. 342015 –  
grid DIN A5  
art.no. 342016  
ruled DIN A4  
art.no. 342011  
ruled DIN A5  
art.no. 342013



### Pen

- colour: black  
- other colours at request

class 100/ISO 5

unit: 12 pieces

art.no. 390030

NEWSTACLEAN



### Paper 72 g/m<sup>2</sup> DIN A4

- colour: light blue

for laserprinter and copier

class 100/ISO 5

DIN A4  
unit: 10 x 250 sheets  
art.no. 340000

DIN A3  
unit: 5 x 250 sheets  
art.no. 340002

DIN A5  
unit: 20 x 250 sheets  
art.no. 340001

NEWSTACLEAN



### Paper 100 g/m<sup>2</sup>

- colour: light blue

for laserprinter and copier

class 100/ISO 5

DIN A4  
unit: 10 x 200 sheets  
art.no. 340003

DIN A3  
unit: 5 x 200 sheets  
art.no. 340005

NEWSTACLEAN



### Printer Paper continuous form 72 g/m<sup>2</sup>

- colour: light blue

for dot matrix printer

class 100/ISO 5

9,5 x 12"  
unit: 2.000 sheets  
art.no. 340008

NEWSTACLEAN



### Notebook DIN A4

- colour: light blue
- 32 sheets/64 pages

class 100/ISO 5

unit: 1 piece

grid  
art-no. 340010  
ruled  
art-no. 340009

NEWSTACLEAN



### Pocket-Notebook

- colour: light blue
- 20 sheets/40 pages
- 80 x 160 mm

class 100/ISO 5

unit: 1 piece

ruled  
art-no. 340014

NEWSTACLEAN



### Sticky Notes

- colour: light blue
- 50 sheets
- 72 x 105 mm

class 100/ISO 5

unit: 30 pieces

art-no. 340013

## SHOES



### 5200

- white
- smooth leather
- adjustable and foldable heel strap

- ESD dissipative according to DIN  
EN 61340

art-no. 315517 - size 36-47



### 5300

- white
- smooth leather, perforated
- adjustable and foldable heel strap

- ESD dissipative according to DIN  
EN 61340

art-no. 315500 - size 36-47



### 5310

- black
- smooth leather, perforated
- adjustable and foldable heel strap

- ESD dissipative according to DIN  
EN 61340

art-no. 315562 - size 36-47

## DISPOSABLES



### Overshoes flat Taptex

- 65% polyester/35 % polyethylene
- sole non-skid PU-coating
- unisex

unit: 200 pairs

art.no. 310085



### Overshoes high Taptex

- 65% polyester/35 % polyethylene
- sole non-skid PU-coating
- unisex

unit: 100 pairs

art.no. 310086



### Overshoes high Tyvek®

- nonwoven
- sole with anti-slip rubberized stripes
- unisex

unit: 200 pieces  
art.no. 310006

### Overshoes high Tyvek®

unit: 50 pairs  
art.no. 310019



### Overshoes blue

- light-weight type
- polyethylene (PE)
- flat style
- 15 x 41 cm

unit: 2.000 pieces

art.no. 310008



### Overshoes blue

- strong type
- polyethylene (PE)
- flat style
- 16 x 40 cm

unit: 1.000 pieces

art.no. 310128



### Overshoes white

- strong type
- polyethylene (PE)
- flat style
- 16 x 40 cm

unit: 1.000 pieces

art.no. 310129





#### Overshoes white/blue

- polypropylene (PP) white
- flat style
- sole polyethylene (PE) blue
- 15 x 41 cm

unit: 1.000 pieces

art.no. 310031



#### Overshoes white/white

- polypropylene (PP) white
- flat style
- sole polyethylene (PE) white
- 15 x 41 cm

unit: 1.000 pieces

art.no. 310032



#### Overshoes antiskid

- polypropylene (PP) blue
- flat style
- sole with anti-skid coating
- 16 x 40 cm

unit: 1.000 pieces

art.no. 310034



#### Kimtech Pure M3 #62465

- class 10/ISO 4
- nonwoven
- white, 3-layers, with ear loops
- outer facing with a lint free polyethylene apertured film
- latex and silicone free for a reduced risk of toxic reactions
- BICOSSOF - inner facing for comfort and breathability
- ca. 175 x 90 mm

unit: 10 bags/50 pieces  
art.no. 320003



#### Kimtech Pure M3 #62466

- class 10/ISO 4
- nonwoven
- white, 3-layers, with ties
- outer facing with a lint free polyethylene apertured film
- latex and silicone free for a reduced risk of toxic reactions
- BICOSSOF - inner facing for comfort and breathability
- ca. 175 x 90 mm

unit: 10 bags/50 pieces  
art.no. 320002

IAB



#### Cleanroom/Pharma

- class 100/ISO 5
- nonwoven
- white
- 3-layer
- with ear loops
- ca. 210 x 90 mm

unit: 40 bags/50 single bags  
art.no. 320001



#### Facemask with visor

- nonwoven
- white
- 3-layers
- with ties
- ca. 180 x 95 mm

unit: 100 pieces  
art.no. 320016

#### Facemask with visor



unit: 300 pieces  
Art.Nr. 320015



#### Procedure # 47090

- nonwoven
- white
- 3-layer
- with ear loops
- ca. 170 x 90 mm

unit: 10 boxes/50 pieces  
art.no. 320019

IAB



#### Facemask green ear loop

- nonwoven
- green
- 3-layer
- with ear loops
- ca. 175 x 95 mm

unit: 40 boxes/50 pieces  
art.no. 320010



#### Bouffant Caps

- nonwoven

unit: 1.000 pieces

#### 60 cm Ø

art.no. 310100 - white  
art.no. 310101 - green  
art.no. 310102 - blue

#### 53 cm Ø

art.no. 310105 - white  
art.no. 310106 - green  
art.no. 310107 - blue



#### Clip Caps

- nonwoven
- 60 cm Ø

unit: 1.000 pieces

art.no. 310113 - white



#### Hairnets

- nonwoven
- big mesh
- 60 cm Ø

unit: 2.000 pieces

art.no. 310110 - white



### Sleeves Taptex

- 65% polyester/35 % polyethylene
- length 55 cm

unit: 300 pairs  
art.no. 310057



### Sleeves Taptex

- 65% polyester/35 % polyethylene
- length 55 cm

unit: 100 pairs  
art.no. 310087



### Goggles \*sterile\*

class 10/ISO 4

- PVC frame
- polycarbonate lens
- latexfree

unit: 10 per outer Tyvek bag

art.no. 390040



### Tape

class 1000/ISO 6

- PVC-film 0,15 mm
- yellow
- roll 5 cm x 33 meters

unit: 1 piece

art.no. 390051



### Handle for Adhesive Rolls

- length handle 23 or 100 cm
- for adhesive rolls 23 cm wide

unit: 1 piece

23 cm Ø  
art.no. 390055  
100 cm Ø  
art.no. 390051



### Adhesive Roll

class 1000/ISO 6

- PE-film
- blue or white
- roll 23 cm x 18 meters

unit: 1 piece

art.no. 390055 – blue  
art.no. 390056 – white

## CHAIRS

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Form No:TR.SAP.0005-02.01





### Stool Model 9107

- class 100/ISO 5
- height regulation with gas spring from 450 to 650 mm
- different colours
- extra large seat

art.-no. 390206



### Anti-fatigue Stool Model 9106

- class 100/ISO 5
- height regulation with gas spring adjustment from 650 to 850 mm
- back-molding in the lumbar region
- sturdy round base with pendulum motion

art.-no. 390207



### Chair Model 9145

- class 100/ISO 5
- ESD-compatible to EN 61340-5-1
- height regulation with gas spring from 470 to 610 mm
- synchronous technique, i.e. synchronous movement of seat and back rest
- height back rest 530 mm

art.-no. 390200



### Chair Model 9142

- class 100/ISO 5
- ESD-compatible to EN 61340-5-1
- height regulation with gas spring from 470 to 610 mm
- contact back rest
- height back rest 530 mm

art.-no. 390201





#### Chair Model 9140

- class 100/ISO 5
- ESD-compatible to EN 61340-5-1
- height regulation with gas spring from 470 to 610 mm
- contact back rest
- back rest height 430 mm

art.-no. 390202



#### Chair Model 9103

- class 100/ISO 5
- height regulation with gas spring from 450 to 640 mm
- seat and back with automation technique

art.-no. 390205

## DISINFECTANTS

### Area Disinfection



#### PRODENE D51

- wipes for disinfecting instruments, surfaces and medical devices.
- impregnated with a bactericidal, fungicidal and virucidal solution

box 100 Wipes

art.no. 391000

### Hand Disinfection



#### PRODENE ASEPTIL

- wipes for handantiseptis and for disinfecting objects, surfaces and medical devices
- impregnated with a bactericidal, fungicidal and virucidal solution

box 100 Wipes

art.no. 391010

### Skin Protection



#### Skin protection gel proGlove

- gel containing alcohol
- with disinfectant properties against the undesirable effects of skin softening
- swelling and structural changes of the horny layer are considerably reduced
- perfume and fat-free

tube 100 ml

art.no. 391020



#### Includal<sup>®</sup> Antisept

- area disinfectant drying quickly and without residue with antibacterial and antifungal effects

spray 200 ml

art.no. 391002



#### Freka<sup>®</sup>-SEPT 80

- ethanolbased
- acts bactericidal, fungicidal, HBV and HIVinactivating
- Mycobacterium tuberculosis, virucidal
- re-moisturizing

bottle 500 ml

art.no. 391015



#### Skin protection cream LINDESA<sup>®</sup> K

- with camomile and beeswax
- non-greasy
- quickly absorbed skin protection and skin care cream

tube 50 ml

art.no. 391025



CLEAN ROOM



S2



climate class 1

31740

CE, EN ISO 20345:2011 S2, SRC  
Size 35-46 | microfiber white | lining with Silver Point | instep area with elastic band | replaceable Soft Comfort insole (art. 350122) | slip-resistant TPU outsole



OB



climate class 1

5300

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 36-47 | smooth leather white, perforated | insole or heel patch leather | heel strap foldable, adjustable | special slip-resistant rubber outsole



ABEBA CLEAN ROOM



OB



climate class 1

37630

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-48 | smooth leather white, perforated | heel strap foldable, adjustable | replaceable acc Wave insole (art. 3573) | non-slip TPU walking sole



OB



climate class 1

39600

CE, EN ISO 20347:2012 OB, A, E, SRC  
Double sizes 35/36 - 45/46 | special material white | heel strap foldable, adjustable | autoclavable | slip-resistant outsole



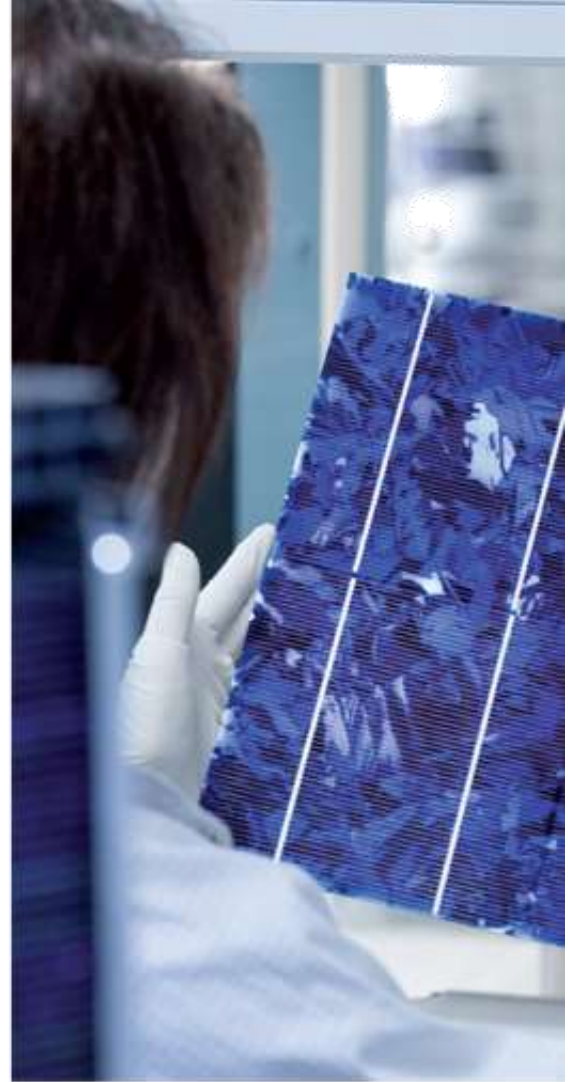
OB



climate class 1

38400

CE, EN ISO 20347:2012 OB, A, FO, SRA  
Size 36-47 | smooth leather white | heel patch microfiber | lining microfiber, breathable, moisture absorbing | heel strap non-foldable, adjustable | instep strap adjustable | slip-resistant PU outsole



O1



micro

climate class 1

32370

CE, EN ISO 20347:2012 O1, SRA  
Size 35-47 | microfiber white | instep area with elastic band | integrated footbed | decontaminable | slip-resistant PU outsole





ABEBA CLEAN ROOM



01



climate class 1

32300

CE, EN ISO 20347:2012 O1, SRA  
Size 35-47 | grained leather white, perforated | lining microfiber, breathable, moisture absorbing | replaceable insole (art. 3551) | slip-resistant PU outsole



02



A micro

climate class 1

31128

CE, EN ISO 20347:2012 O2, FO, SRA  
Size 35-48 | microfiber white | lining with silver fibers | instep area with elastic band | replaceable acc Wave insole (art. 3559) | slip-resistant PU outsole



S2



climate class 1

31032

CE, EN ISO 20345:2011 S2, SRA  
Size 35-48 | smooth leather white | lining with silver ions | instep area with elastic band | replaceable acc Wave insole (art. 3557) | slip-resistant PU outsole



02



A micro

climate class 1

36740

CE, EN ISO 20347:2012 O2, FO, SRC  
Size 35-48 | microfiber white | lining with Silver Point | instep area with elastic band | replaceable Soft Comfort insole (art. 350112) | slip-resistant TPU outsole







ABEBA CLEAN ROOM



OB



climate class 1

3620

CE, EN ISO 20347:2012 OB, A, E, SRA  
Size 35-47 | microfiber white | fixed gaiter, cleanroom textile |  
acc Wave insole



climate class 1

3910

Size\* Gr. 1 - Gr. 5 | light blue | upper integrity 1750 antibacterial |  
artificial leather sole | overshoe with elastic instep



climate class 1

3900

Size\* Gr. 1 - Gr. 5 | white | upper integrity 1750 antibacterial |  
artificial leather sole | overshoe with elastic instep

\*Size:

Gr. 1 = 36-37 | Gr. 2 = 38-39 | Gr. 3 = 40-43 |  
Gr. 4 = 44-46 | Gr. 5 = 47-48

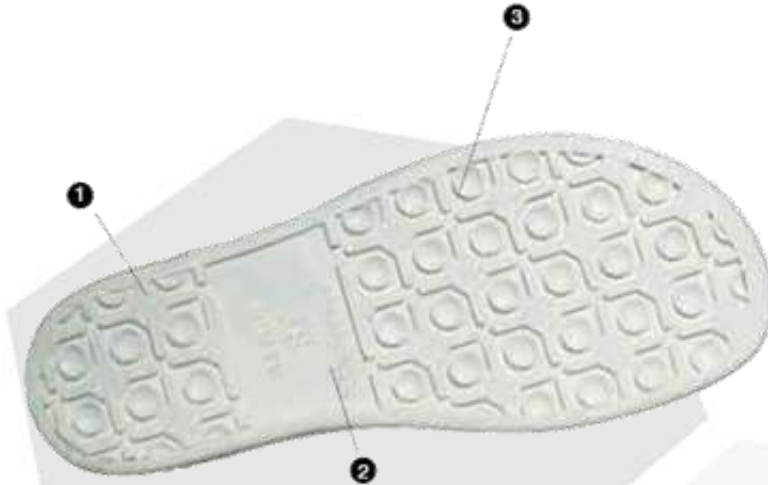
# THE ORIGINAL

## THE CLOG THAT CONVINCES

An all-rounder for the highest demands in quality, comfort and design, which won't let you down on difficult floors thanks to its high slip resistance.

Whether conventional, colourful or with smart design the Original is always the right choice for work or leisure time. Every buckle is corrosion-resistant and nickel-free.

WWW.ABEBA.COM



## HIGHLIGHTS

- Sanitized® treated

## TECHNOLOGY

**HEEL STRAP**  
adjustable, foldable



**PERFORATION**  
for good ventilation



## OUTSOLE

- 1\_SRC slip resistance**  
according to EN ISO 20347:2012
- 2\_ Resistant**  
to animal fats, oil and fuel
- 3\_Cross/circle profile**



THE ORIGINAL



OB

A micro

77021

CE, EN ISO 20347:2012 OB, E, FO, SRC  
Size 35-47 | microfiber white | insole microfiber | heel strap foldable, adjustable | slip-resistant TPU outsole



THE ORIGINAL



OB

A micro

77030

CE, EN ISO 20347:2012 OB, E, FO, SRC  
Size 35-47 | microfiber black, perforated | insole microfiber | heel strap foldable, adjustable | slip-resistant TPU outsole



OB

A micro

77031

CE, EN ISO 20347:2012 OB, E, FO, SRC  
Size 35-47 | microfiber black | insole microfiber | heel strap foldable, adjustable | slip-resistant TPU outsole



OB

A micro

77020

CE, EN ISO 20347:2012 OB, E, FO, SRC  
Size 35-47 | microfiber white, perforated | insole microfiber | heel strap foldable, adjustable | slip-resistant TPU outsole







THE ORIGINAL



OB

7021

CE, EN ISO 20347:2012 OB, FO, SRC  
Size 35-47 | smooth leather white | insole leather | heel strap  
foldable, adjustable | slip-resistant outsole



OB

7031

CE, EN ISO 20347:2012 OB, FO, SRC  
Size 35-47 | smooth leather black | insole leather | heel strap  
foldable, adjustable | slip-resistant outsole



OB

7204

CE, EN ISO 20347:2012 OB, A, FO, SRC - **DISCONTINUED**  
Size 35-47 | smooth leather white with pattern | insole leather |  
heel strap foldable, adjustable | heel cushion | slip-resistant outsole



THE ORIGINAL



OB

7020

CE, EN ISO 20347:2012 OB, FO, SRC  
Size 35-47 | smooth leather white, perforated | insole leather |  
heel strap foldable, adjustable | slip-resistant outsole



OB

7205

CE, EN ISO 20347:2012 OB, A, FO, SRC - **DISCONTINUED**  
Size 35-47 | smooth leather white with pattern | insole leather |  
heel strap foldable, adjustable | heel cushion | slip-resistant outsole



OB

7030

CE, EN ISO 20347:2012 OB, FO, SRC  
Size 35-47 | smooth leather black, perforated | insole leather |  
heel strap foldable, adjustable | slip-resistant outsole



THE ORIGINAL



OB

antistatic

5013

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 35-47 | smooth leather white | heel patch leather | heel strap  
foldable, adjustable | slip-resistant outsole



OB

antistatic

5081

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 35-43 | smooth leather white/mint | heel patch leather | heel  
strap foldable, adjustable | slip-resistant outsole



OB

7091

CE, EN ISO 20347:2012 OB, FO, SRC  
Size 35-43 | smooth leather mint/white | insole leather | heel strap  
foldable, adjustable | slip-resistant outsole



OB

7081

CE, EN ISO 20347:2012 OB, FO, SRC  
Size 35-43 | smooth leather blue/white | insole leather | heel strap  
foldable, adjustable | slip-resistant outsole





OB

antistatic

5007

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 35-47 | smooth leather white, perforated | heel patch leather |  
heel strap foldable, adjustable | slip-resistant outsole



OB

antistatic

5080

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 35-43 | smooth leather white/mint, perforated | heel patch  
leather | heel strap foldable, adjustable | slip-resistant outsole



OB

7090

CE, EN ISO 20347:2012 OB, FO, SRC  
Size 35-43 | smooth leather mint/white, perforated | insole leather |  
heel strap foldable, adjustable | slip-resistant outsole



OB

7080

CE, EN ISO 20347:2012 OB, FO, SRC  
Size 35-43 | smooth leather blue/white, perforated | insole leather |  
heel strap foldable, adjustable | slip-resistant outsole



THE ORIGINAL



OB

7201

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 35-47 | smooth leather white/black with pattern | insole leather | heel strap foldable, adjustable | heel cushion | slip-resistant outsole



OB

7050

CE, EN ISO 20347:2012 OB, FO, SRC  
Size 35-47 | smooth leather white | insole leather | instep strap adjustable | slip-resistant outsole





THE ORIGINAL



OB

7209

CE, EN ISO 20347:2012 OB, A, FO, SRC

Size 35-47 | smooth leather black | insole leather | heel strap  
non-foldable, removable | instep strap adjustable | lining extremely  
soft microfiber with silver ions | heel cushion | slip-resistant outsole



OB

7208

CE, EN ISO 20347:2012 OB, A, FO, SRC

Size 35-47 | smooth leather white | insole leather | heel strap  
non-foldable, removable | instep strap adjustable | lining extremely  
soft microfiber with silver ions | heel cushion | slip-resistant outsole





OB

7009

OB



5009

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 36-42 | smooth leather black, perforated | heel patch leather  
| heel strap foldable, adjustable | wedge heel 45 mm | narrow fit |  
slip-resistant PU outsole



OB

7008

OB



5008

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 36-42 | smooth leather white, perforated | heel patch leather  
| heel strap foldable, adjustable | wedge heel 45 mm | narrow fit |  
slip-resistant PU outsole



OB

7002

OB



5004

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 36-42 | smooth leather white | heel patch leather | heel strap  
foldable, adjustable | wedge heel 45 mm | narrow fit | slip-resistant  
PU outsole



OB

7001

OB



5001

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 36-42 | smooth leather white, perforated | heel patch leather  
| heel strap foldable, adjustable | wedge heel 45 mm | narrow fit |  
slip-resistant PU outsole



OB

A micro

7521

OB



A micro

37521

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 36-42 | microfiber white | heel patch microfiber | heel strap  
foldable, adjustable | slip-resistant TPU outsole



OB

A micro

7531

OB



A micro

37531

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 36-42 | microfiber black | heel patch microfiber | heel strap  
foldable, adjustable | slip-resistant TPU outsole



OB

A micro

7530

OB



A micro

37530

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 36-42 | microfiber black, perforated | heel patch microfiber |  
heel strap foldable, adjustable | slip-resistant TPU outsole



OB

A micro

7520

OB



A micro

37520

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 36-42 | microfiber white, perforated | heel patch microfiber |  
heel strap foldable, adjustable | slip-resistant TPU outsole





DYNAMIC



OB

7310

OB



37310

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-48 | smooth leather white with pattern | heel strap foldable, adjustable | replaceable acc Wave insole (art. 3574) | slip-resistant TPU outsole



OB

7313

OB



37313

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-48 | smooth leather white/red with pattern | heel strap foldable, adjustable | replaceable acc Wave insole (art. 3574) | slip-resistant TPU outsole



OB

7312

OB



37312

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-48 | smooth leather white/blue with pattern | heel strap foldable, adjustable | replaceable acc Wave insole (art. 3574) | slip-resistant TPU outsole



OB

7315

OB



37315

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-48 | smooth leather black/brown with pattern | heel strap foldable, adjustable | replaceable acc Wave insole (art. 3574) | slip-resistant TPU outsole







NEW



OB

A micro

7320

OB



A micro

37320

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-43 | microfiber white with pattern | heel strap non-foldable, adjustable | replaceable acc Wave insole (art. 3574) | slip-resistant TPU outsole



NEW



OB

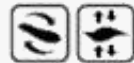
7325

OB



37325

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-48 | knitted textile white | heel strap foldable, adjustable | replaceable acc Wave insole (art. 3574) | slip-resistant TPU outsole





DYNAMIC



OB

A<sup>micro</sup>

7335

OB



A<sup>micro</sup>

37335

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-48 | microfiber white/black | seamless upper | heel strap  
non-foldable, adjustable | replaceable acc Wave insole (art. 3574) |  
slip-resistant TPU outsole



OB

A<sup>micro</sup>

7331

OB



A<sup>micro</sup>

37331

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-48 | microfiber black/blue | seamless upper | heel strap  
non-foldable, adjustable | replaceable acc Wave insole (art. 3574) |  
slip-resistant TPU outsole



OB

A<sup>micro</sup>

7332

OB



A<sup>micro</sup>

37332

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-48 | microfiber black/red | seamless upper | heel strap  
non-foldable, adjustable | replaceable acc Wave insole (art. 3574) |  
slip-resistant TPU outsole



OB

A<sup>micro</sup>

37333

OB



A<sup>micro</sup>

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-48 | microfiber black/yellow | seamless upper | heel strap  
non-foldable, adjustable | replaceable acc Wave insole (art. 3574) |  
slip-resistant TPU outsole





OB

A<sup>micro</sup>

7345

OB



A<sup>micro</sup>

37345

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-48 | microfiber white/black with **white breathable textile inlays** | heel strap non-foldable, adjustable | replaceable acc Wave insole (art. 3574) | slip-resistant TPU outsole



OB

A<sup>micro</sup>

7341

OB



A<sup>micro</sup>

37341

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-48 | microfiber black/blue with **black breathable textile inlays** | heel strap non-foldable, adjustable | replaceable acc Wave insole (art. 3574) | slip-resistant TPU outsole



OB

A<sup>micro</sup>

7342

OB



A<sup>micro</sup>

37342

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-48 | microfiber black/red with **black breathable textile inlays** | heel strap non-foldable, adjustable | replaceable acc Wave insole (art. 3574) | slip-resistant TPU outsole



OB

A<sup>micro</sup>

37343

OB



A<sup>micro</sup>

37343

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-48 | microfiber black/yellow with **black breathable textile inlays** | heel strap non-foldable, adjustable | replaceable acc Wave insole (art. 3574) | slip-resistant TPU outsole







DYNAMIC



OB

A<sup>+</sup>micro

7360

OB



A<sup>+</sup>micro

37360

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-48 | microfiber white | heel strap non-foldable, adjustable |  
replaceable acc Wave insole (art. 3574) | slip-resistant TPU outsole



OB

A<sup>+</sup>micro

7361

OB



A<sup>+</sup>micro

37361

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-48 | microfiber black | heel strap non-foldable, adjustable |  
replaceable acc Wave insole (art. 3574) | slip-resistant TPU outsole





EASY



OB

7630

OB



37630

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-48 | smooth leather white, perforated | heel strap foldable,  
adjustable | replaceable acc Wave insole (art. 3573) | slip-resistant  
TPU outsole



OB

7631

OB



37631

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-48 | smooth leather black, perforated | heel strap foldable,  
adjustable | replaceable acc Wave insole (art. 3573) | slip-resistant  
TPU outsole



OB

A micro

7621

OB



A micro

37621

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-43 | microfiber patent black | heel strap non-foldable,  
adjustable | replaceable acc Wave insole (art. 3573) | slip-resistant  
TPU outsole



OB

A micro

7620

OB



A micro

37620

CE, EN ISO 20347:2012 OB, A, E, FO, SRC  
Size 35-43 | microfiber patent white | heel strap non-foldable,  
adjustable | replaceable acc Wave insole (art. 3573) | slip-resistant  
TPU outsole





RUBBER



OB

9200

OB



5200

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 36-47 | smooth leather white | insole or heel patch leather  
| heel strap foldable, adjustable | slip-resistant special rubber  
outsole



OB

9252

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 36-47 | smooth leather black | insole leather | heel strap  
foldable, adjustable | slip-resistant special rubber outsole



OB

9250

OB



5250

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 36-47 | smooth leather navy blue | insole or heel patch leather  
| heel strap foldable, adjustable | slip-resistant special rubber  
outsole

RUBBER



OB

9300

OB



5300

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 36-47 | smooth leather white, perforated | insole or heel patch  
leather | heel strap foldable, adjustable | slip-resistant special  
rubber outsole



OB

9310

OB



5310

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 36-47 | smooth leather black, perforated | insole or heel patch  
leather | heel strap foldable, adjustable | slip-resistant special  
rubber outsole





RUBBER



OB

9100

OB



5100

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 36-47 | smooth leather white | insole or heel patch leather  
| heel strap non-foldable, adjustable | instep strap adjustable |  
slip-resistant special rubber outsole



OB

9150

OB



5150

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 36-47 | smooth leather navy blue | insole or heel patch  
leather | heel strap non-foldable, adjustable | instep strap  
adjustable | slip-resistant special rubber outsole




OB

9110

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 36-47 | smooth leather black | insole leather | heel strap  
non-foldable, adjustable | instep strap adjustable | slip-resistant  
special rubber outsole



 NATURE



OB

8040

OB



4040

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 34-48 | smooth leather white | heel strap non-foldable, adjustable | instep strap adjustable | buckle fastening | slip-resistant special rubber outsole



OB

8045

OB



4055

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 34-48 | smooth leather black | heel strap non-foldable, adjustable | instep strap adjustable | buckle fastening | slip-resistant special rubber outsole



OB



4045

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 34-48 | smooth leather dark blue, perforated | heel strap non-foldable, adjustable | instep strap adjustable | buckle fastening | slip-resistant special rubber outsole



OB



4050

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 34-48 | smooth leather white, perforated | heel strap non-foldable, adjustable | instep strap adjustable | buckle fastening | slip-resistant special rubber outsole



4085

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 34-48 | smooth leather black | 2 instep straps, adjustable |  
velcro fastening | slip-resistant special rubber outsole



4080

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 34-48 | smooth leather white | 2 instep straps, adjustable |  
velcro fastening | slip-resistant special rubber outsole



4090

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 34-48 | smooth leather white | heel strap non-foldable,  
adjustable | 2 instep straps, adjustable | velcro fastening | slip-  
resistant special rubber outsole



4096

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 34-48 | velour leather ocean | heel strap non-foldable,  
adjustable | 2 instep straps, adjustable | buckle fastening | slip-  
resistant special rubber outsole



4086

CE, EN ISO 20347:2012 OB, A, FO, SRC  
Size 34-48 | velour leather ocean | 2 instep straps, adjustable |  
buckle fastening | slip-resistant special rubber outsole





AIR CUSHION



01



32300

CE, EN ISO 20347:2012 O1, SRA  
Size 35-47 | grained leather white, perforated | lining microfiber, breathable, moisture absorbing | replaceable insole (art. 3551) | slip-resistant PU outsole



01



32310

CE, EN ISO 20347:2012 O1, SRA  
Size 39-47 | grained leather black, perforated | lining microfiber, breathable, moisture absorbing | replaceable insole (art. 3551) | slip-resistant PU outsole



02

2710

02



32710

CE, EN ISO 20347:2012 O2, SRA  
Size 39-47 | grained leather black | lining microfiber, breathable, moisture absorbing | replaceable insole (art. 3551) | slip-resistant PU outsole



02

2700

02



32700

CE, EN ISO 20347:2012 O2, SRA  
Size 39-47 | grained leather white | lining microfiber, breathable, moisture absorbing | replaceable insole (art. 3551) | slip-resistant PU outsole





01  **2370**

01   **32370**

CE, EN ISO 20347:2012 O1, SRA  
Size 35-47 | microfiber white | instep area with elastic band |  
integrated footbed | decontaminable | slip-resistant PU outsole




02 **2650**

02  **32650**

CE, EN ISO 20347:2012 O2, SRA  
Size 35-47 | grained leather black | lining with silver ions |  
replaceable insole (art. 3551) | slip-resistant PU outsole




02 **2610**

02  **32610**

CE, EN ISO 20347:2012 O2, SRA  
Size 35-47 | grained leather black | lining microfiber, breathable,  
moisture absorbing | replaceable insole (art. 3551) | slip-resistant  
PU outsole



02 **2600**

02  **32600**

CE, EN ISO 20347:2012 O2, SRA  
Size 35-47 | grained leather white | lining microfiber, breathable,  
moisture absorbing | replaceable insole (art. 3551) | slip-resistant  
PU outsole





LIGHT



02

micro

1128

02



micro

31128

CE, EN ISO 20347:2012 O2, FO, SRA  
Size 35-48 | microfiber white | lining with silver ions | instep area with elastic band | replaceable acc Wave insole (art. 3559) | slip-resistant PU outsole



02

micro

1129

02



micro

31129

CE, EN ISO 20347:2012 O2, FO, SRA  
Size 35-48 | microfiber black | lining with silver ions | instep area with elastic band | replaceable acc Wave insole (art. 3559) | slip-resistant PU outsole



02

micro

1126

02



micro

31126

CE, EN ISO 20347:2012 O2, FO, SRA  
Size 35-48 | microfiber white | lining with silver ions | replaceable acc Wave insole (art. 3559) | slip-resistant PU outsole







UNIG

NEW



01

6724

01



36724

CE, EN ISO 20347:2012 O1, FO, SRC  
Size 35-43 | textile Paisley, water-repellent | lining with silver ions |  
replaceable Soft Comfort insole (art. 350112) | slip-resistant TPU  
outsole



MICRO  
FIBRE

NEW



02

6728

02



36728

CE, EN ISO 20347:2012 O2, FO, SRC  
Size 35-48 | textile black with pattern, water-repellent | lining with  
silver ions | replaceable Soft Comfort insole (art. 350112) |  
slip-resistant TPU outsole



\*\*\*  
AVAILABLE  
in the 4th quarter  
2019



02

6729

02



36729

CE, EN ISO 20347:2012 O2, FO, SRC  
Size 35-48 | textile white with pattern, water-repellent | lining with  
silver ions | replaceable Soft Comfort insole (art. 350112) |  
slip-resistant TPU outsole





UNIS



NEW



02

micro

6766

02



micro

36766

CE, EN ISO 20347:2012 O2, FO, SRC  
Size 35-43 | microfiber white with coloured lacing | lining with silver ions | replaceable Soft Comfort insole (art. 350112) | incl. white exchange laces | slip-resistant TPU outsole



NEW



01

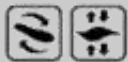
6773

01



36773

CE, EN ISO 20347:2012 O1, FO, SRC  
Size 35-48 | knitted textile blue | lining with silver ions | replaceable Soft Comfort insole (art. 350112) | slip-resistant TPU outsole



NEW



01

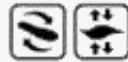
6772

01



36772

CE, EN ISO 20347:2012 O1, FO, SRC  
Size 35-48 | knitted textile white | lining with silver ions | replaceable Soft Comfort insole (art. 350112) | slip-resistant TPU outsole





UNİ6



02

A micro

6740

02



A micro

36740

CE, EN ISO 20347:2012 O2, FO, SRC

Size 35-48 | microfiber white | lining with silver ions | instep area with elastic band | replaceable Soft Comfort insole (art. 350112) | slip-resistant TPU outsole



02

A micro

6741

02



A micro

36741

CE, EN ISO 20347:2012 O2, FO, SRC

Size 35-48 | microfiber black | lining with silver ions | instep area with elastic band | replaceable Soft Comfort insole (art. 350112) | slip-resistant TPU outsole







UNI6



01

6760

01



36760

CE, EN ISO 20347:2012 O1, FO, SRC

Size 35-48 | functional leather white with honeycomb pattern |  
water-repellent | scratch-resistant | lining with silver ions |  
replaceable Soft Comfort insole (art. 350112) | slip-resistant TPU  
outsole



02

6761

02



36761

CE, EN ISO 20347:2012 O2, FO, SRC

Size 35-48 | functional leather black with honeycomb pattern |  
water-repellent | scratch-resistant | lining with silver ions |  
replaceable Soft Comfort insole (art. 350112) | slip-resistant TPU  
outsole



UN16



UN16



01

6762

01



36762

CE, EN ISO 20347:2012 O1, FO, SRC  
Size 35-48 | functional leather blue with honeycomb pattern |  
water-repellent | scratch-resistant | lining with silver ions |  
replaceable Soft Comfort insole (art. 350112) | slip-resistant TPU  
outsole



01

6763

01



36763

CE, EN ISO 20347:2012 O1, FO, SRC  
Size 35-48 | functional leather navy blue | water-repellent |  
scratch-resistant | lining with silver ions | replaceable Soft Comfort  
insole (art. 350112) | slip-resistant TPU outsole



370118

Set of shoelaces in three colours (red, blue  
and green) | length 80 cm for low shoes |  
exclusively available with model (3)6780



02

A micro

6780

02



A micro

36780

CE, EN ISO 20347:2012 O2, FO, SRC  
Size 35-48 | microfiber white | lining with silver ions | replaceable  
Soft Comfort insole (art. 350112) | slip-resistant TPU outsole



02

A micro

6781

02



A micro

36781

CE, EN ISO 20347:2012 O2, FO, SRC  
Size 35-48 | microfiber black | lining with silver ions | replaceable  
Soft Comfort insole (art. 350112) | slip-resistant TPU outsole





02

A<sup>micro</sup>

6782

02



A<sup>micro</sup>

36782

CE, EN ISO 20347:2012 O2, FO, SRC  
Size 35-48 | microfiber grey/blue | lining with silver ions |  
replaceable Soft Comfort insole (art. 350112) | slip-resistant TPU  
outsole



02

A<sup>micro</sup>

6785

02



A<sup>micro</sup>

36785

CE, EN ISO 20347:2012 O2, FO, SRC  
Size 35-48 | microfiber grey/black | lining with silver ions |  
replaceable Soft Comfort insole (art. 350112) | slip-resistant TPU  
outsole



02

A<sup>micro</sup>

6783

02



A<sup>micro</sup>

36783

CE, EN ISO 20347:2012 O2, FO, SRC  
Size 35-48 | microfiber grey/red | lining with silver ions |  
replaceable Soft Comfort insole (art. 350112) | slip-resistant TPU  
outsole





# AUTOCLAVABLE

FOR MAXIMUM HYGIENE

Reusable and temperature-stable clothes and equipment are processed by autoclaving to kill all germs and bacteria. This is done mainly in medical areas, microbiological or bio molecular research institutes as well as in the food and pharmaceutical industry.

The ABEBA autoclavable clogs may be treated by autoclaving at 135°C 5 min to meet the requirements of the necessary sterilising level. They offer a slip resistant walking sole and are ESD dissipative according to EN 61340.

A foldable heel strap assures stability while standing.

WWW.ABEBA.COM



## HIGHLIGHTS

- Autoclavable special material
- Autoclavable at 135°C, 5 min (no additives)



- Washable at 60°C (no additives)



## TECHNOLOGY

**ANTISTATIC/ESD DISSIPATIVE**  
according to EN 61340

**HEEL STRAP**  
adjustable, foldable



## OUTSOLE

**1\_SRC slip resistance**  
according to EN ISO 20347:2012

**2\_Sole**  
abrasion resistant



AUTOCLAVABLE



OB

9600

OB



39600

CE, EN ISO 20347:2012 OB, A, E, SRC

Double sizes\* 35/**36** - 45/**46** | special material white | heel strap foldable, adjustable | autoclavable | slip-resistant outsole



OB

9610

OB



39610

CE, EN ISO 20347:2012 OB, A, E, SRC

Double sizes\* 35/**36** - 45/**46** | special material blue | heel strap foldable, adjustable | autoclavable | slip-resistant outsole



OB

9620

OB



39620

CE, EN ISO 20347:2012 OB, A, E, SRC

Double sizes\* 35/**36** - 45/**46** | special material green | heel strap foldable, adjustable | autoclavable | slip-resistant outsole



OB

9630

OB



39630

CE, EN ISO 20347:2012 OB, A, E, SRC

Double sizes\* 35/**36** - 45/**46** | special material orange | heel strap foldable, adjustable | autoclavable | slip-resistant outsole



## ! INFORMATION

### \*Double sizes:

Please use size in bold when placing your order.

35/**36**, 37/**38**, 39/**40**,

41/**42**, 43/**44**, 45/**46**



## Actril® Cold Sterilant

### Ready-To-Use Sporicide For Surface Disinfection

Actril Cold Sterilant is an effective, ready-to-use disinfectant and sterilant for hard surfaces commonly found in pharmaceutical cleanrooms. Surfaces made from non-porous materials such as plastics, stainless steel or glass can be disinfected using Actril Cold Sterilant solutions. Examples include counter tops, walls, floors, etc.

#### Features

- Effective in the presence of 5% blood serum
- Superior sporicidal, bactericidal, fungicidal, mycobactericidal and virucidal activity
- Does not produce any toxic Aldehyde Vapors, keeping y our employees safe
- Compatible with all common cleanroom surfaces
- Easily disposable and biodegradable, keeping the environment safe
- Filtered through 0.2 micron filters



### Efficacy of Actril Cold Sterilant

Contact Time			
Type	Organism	Tested at 68°F (20°C)	Test Results
Spores	Bacillus subtilis Clostridium sporogenes	5.5 hours	100% kill of $\geq 10^4$ endospores
Mycobacteria	Mycobacterium bovis	10 minutes	100% kill of $\geq 10^3$ microorganisms
Vegetative Bacteria	Pseudomonas aeruginosa Salmonella choleraesuis Staphylococcus aureus	10 minutes Diluted 1:10	100% kill of $\geq 10^6$ bacteria
Fungi	Trichophyton mentagrophytes	10 minutes	100% kill of $\geq 10^7$ spores
Non-lipid small virus	Polio virus Type 2	15 minutes	100% kill of $\geq 10^5$ viruses
Lipid medium virus	Herpes simplex Type 1,2 HIV (AIDS virus)	3 minutes Herpes - Diluted 1:10 HIV - Diluted to MEC	100% kill of Herpes $\geq 10^{1.5}$ viruses 100% kill of HIV $\geq 10^4$ viruses
Hepatitis B and C	No approved method to test for hepatitis B&C exists.*	N/A	N/A

\* A direct test is unavailable, however they are generally considered easier to kill than Polio viruses.

### Actril Cold Sterilant Material Compatibility

Actril Cold Sterilant has been tested and shown to be compatible with material coupons and medical devices made from the materials shown below:

<b>Metals</b>	<b>Plastics</b>	<b>Elastomers</b>
Stainless Steel (316)	Polypropylene	Silicone rubber
Aluminum Alloy (6061)	Teflon	
	Acrylonitrile-butadienestyrene (ABS)	
	Polyethylene	
	Polyvinylchloride (PVC)	
	Polycarbonate	
	Tygon	

Other materials not listed should be tested for compatibility prior to use.



## Safety & the Environment

Actril Cold Sterilant, is extremely eco-friendly because Actril's raw materials are not listed as carcinogenic or mutagenic materials, does not produce toxic vapors, and is safe for the environment. It is completely biodegradable and will decompose into oxygen, water and acetic acid.\*

\* Unused ACTRIL Cold Sterilant is acidic and requires normal neutralization as specified by local regulations. ACTRIL has a pH of 1.5 to 2.0.

## Actril Ordering Information

Part Number	Description	Quantity
<b>In Europe</b>		
176-02-053	Actril Cold Sterilant	2 x 5 liter case
176-02-056	Actril Cold Sterilant	6 x 1 liter case
3024982	Actril (Clean Room Packaging) Europe	6 x 1 liter case w/6 sprayers

## Actril® Cold Sterilant Clean Room Packaging

Actril Cold Sterilant, already used in clean rooms for 20 years, is now even easier to use in these critical environments. Actril Cold Sterilant has been optimized for the clean room environment by packaging it to bring straight into the clean room suite. No longer does the product need to be cleaned and wiped down to bring it into these critical environments. Because of the unique method of disinfection, Actril does not have to be part of a rotation of disinfectants program.

### Applications

- ▶ Pharmaceutical, biotechnology, medical device manufacturing
- ▶ Research and laboratory facilities
- ▶ Other critical contamination environments

### Sporicidal Disinfectant

Actril Cold Sterilant is a sporicidal disinfectant that is proven to inactivate even the most difficult microorganisms. For a full listing of microbiological testing, please contact your Actril Cold Sterilant representative.

### Low Residuals

Once applied, Actril Cold Sterilant effectively works to deactivate all bio-matter. Residuals after use (in internal studies) were below detectable limits.

### Clean Room Packaging

Each case of Actril includes 6 x 0.96 liters & 6 sprayers per case. Each bottle and sprayer are wiped down with alcohol and clean room wipers, double bagged in a controlled environment and EtO processed.

### EtO Processed

Validation testing supports a 10<sup>6</sup> sporicidal reduction of contamination. Specifically, three validation half cycles confirmed complete kill on the recommended external and internal Biological Indicators (BI) (10<sup>6</sup> B. atrophaeus) following EtO exposure. (Testing was done in accordance to the ANSI/AAMI/ISO 11135:2007.) EtO residual levels conform to ISO 10993-7.

### Documentation

Full documentation of the product, procedures and other supporting test reports including the following:

*Certificate of Conformance (with case) and Certificate of Analysis (available on website)*

*Test reports available on request include Surface Challenge Test "USP <1072>", efficacy against various organisms, chemical stability, EtO residuals and surface residuals.*

### Key Specifications

Active Chemical Ingredients	Hydrogen Peroxide: 0.8% min (1% normative)
	Peracetic Acid: 0.06% min (0.08% normative)
Filtration	Filtered at 0.2 microns, Absolute



## MinnCare® Cold Sterilant

### Protect Both You and Your System

MinnCare Cold Sterilant is a peracetic acid solution developed for use on reverse osmosis (RO) membranes and their associated distribution systems. Peracetic acid formulations were developed by Minntech Corporation in 1976 and are currently being used in a wide variety of applications. Mar Cor Purification distributes MinnCare Cold Sterilant to the Medical, Pharmaceutical and Industrial Marketplace.

### Superior Biocidal Activity

Protect reverse osmosis membranes and their associated distribution systems against short- and long-term bacterial problems. MinnCare Cold Sterilant is a powerful oxidant that stops organism growth by oxidizing microbial cell proteins and enzyme systems and effectively removes biofilms.

MinnCare Cold Sterilant provides a 6 log reduction of bacteria population at a 100X dilution (1%) within a 36-minute soak time. Elimination of bacterial contamination will help improve product quality and contribute to increased RO membrane life.

MinnCare Cold Sterilant may eliminate the need for acid cleaning of fouled membranes prior to disinfection in cases where transition metals, such as iron, are not present.

### Biodegradable and Ease of Disposal

MinnCare Cold Sterilant is biodegradable and will decompose into oxygen, water and acetic acid. It poses no threat to municipal waste treatment plants.\* Residual test strips are available that accurately verify rinse-out levels of MinnCare Cold Sterilant as low as one part per million.



### Compatible w/ Thin Film Composite Membranes

MinnCare Cold Sterilant gently and completely cleans membranes. Minntech peracetic acid formulations have been successfully used at hundreds of locations on thin film composite membranes and cellulose acetate membranes. Many of the applications have included extended soak times. MinnCare Cold Sterilant will disinfect membranes and protect against decreased flux that is commonly associated with the use of formaldehyde.

### No Toxic-Aldehyde Vapors

MinnCare Cold Sterilant protects employees from exposure to toxic aldehyde vapors. Although proper care must be taken when handling concentrated MinnCare Cold Sterilant, the use-dilution form requires no exceptional handling procedures.

\*Spent MinnCare Cold Sterilant is acidic and requires normal neutralization as specified by your state and local regulations. A 1% solution of MinnCare Cold Sterilant has a pH of 3.5.



## Minnicare® Test Strips

### Validated Peracetic Acid Test Strips

Minnicare Test Strips provide quick results with easy-to-read indicators. Use the Minnicare 1% TS Test Strips as a pass/fail measurement for adequate concentration of sterilant after dilution. Then verify residual levels after rinse-out using Minnicare Residual Test Strips.

Minnicare Peracetic Acid Test Strips represent the leading edge of test strip technology. Designed by the producers of Minnicare Cold Sterilant, these test strips combine ease-of-use with precise results.

Both the Minnicare 1% TS and the Minnicare Residual Test Strips may be used up to and including the last day of the month indicated by the expiration printed on the container even after opening. There is no need to separately record and verify container opening dates.

### Minnicare® 1% Test Strips

Minnicare 1% Test Strips verify adequate concentration of a 1% Minnicare solution during sanitization of your high purity water system. These convenient dip-and-read strips can be used at any test port in your system to provide an accurate pass/fail measurement of Minnicare solution.



### Minnicare® Residual Test Strips

Minnicare Residual Test Strips are easy to use and are conveniently packaged 100 test strips per container. Each strip has a “reaction zone” pad located at one end of the strip. When stored and used properly, the test strip pad can indicate residual Minnicare levels as low as 1 part per million (ppm). The reaction zones are set to provide six different reading levels at 100, 30, 10, 3, 1 and 0 (zero) parts per million.

### Minnicare Ordering Information

U.S. Part No.	Canadian Part No.	European Part No.	Asia Pacific Part No.	Description	Packaging
176-01-001	78399-647	n/a	n/a	Minnicare Cold Sterilant 4 x 1 quart	4 x 1 quarts
176-01-002	78399-646	n/a	n/a	Minnicare Cold Sterilant 4 US gallons	4 x 1 US gallons
176-01-003	78399-648	n/a	n/a	Minnicare Cold Sterilant 40 US gallons	40 gallons in 55 gal. drum
n/a	n/a	176-01-125	78397-983	Minnicare Cold Sterilant 2 x 5 liters	2 x 5 liters
n/a	n/a	176-01-121	78397-825	Minnicare Cold Sterilant 2 x 10 liters	2 x 10 liters
n/a	n/a	176-01-129	78397-229	Minnicare Cold Sterilant 6 x 1 kg	6 x 1 kg
185-40-004	78338-000	185-40-004	n/a	Minnicare Residual Test Strips	100 per vial
185-40-005	78339-000	185-40-005	n/a	Minnicare 1% Test Strips	100 per vial

## MinnCare Dry Fog<sup>®</sup> 2 System

### The Complete Solution for Clean Room Aerosol-Based Bio-Decontamination

The Minncare Dry Fog 2 system provides an easy to use, high technology solution for clean room and critical area fogging. The combination of our highly effective Minncare<sup>®</sup> Cold Sterilant chemical and our state of the art Dry Fog delivery system enables users to rapidly and safely deliver Minncare vapor to even the most complex areas. Its sanitary and autoclavable design will permit its use in the most critical areas within pharmaceutical and other industries concerned with maintaining the utmost levels of sterility.

### Standard Features & Benefits

#### Configurable Spray Head

Newly designed spray apparatus allows for eight different nozzle(s) positions increasing the coverage possibilities for higher flexibility. Additionally, the new head allows for spray diffusion that is horizontal or vertical.

#### Short Process Time

Typically, the entire process can be completed in less than 3 hours, depending upon room size and ventilation system efficiency, compared to up to 3-5 days with some conventional systems.

- Substantially lower cleanroom downtime
- Regular use may contribute to maintaining low particulate levels due to the suppression of airborne particles
- Lack of noise and ultrasonic vibration during use

#### Optimal Efficacy with Minncare

Minncare is a peracetic acid and hydrogen peroxide based proprietary chemistry developed by Medivators for optimized biocidal efficacy.

- EPA registered for fogging as part of normal cleaning and disinfection procedures
- Faster and safer to use than existing aldehyde based



#### Highly Flexible System

The system is easily adaptable to differing room dimensions and configurations and can be adjusted to suit any room height.

- Robust construction, with easy maintenance
- Does not require electrical connection
- Sanitary construction using 316L Stainless Steel and Titanium for key components
- 100% Autoclavable design
- Single units are suitable for use in rooms up to 35,000 ft<sup>3</sup> (1000 m<sup>3</sup>) and will disperse up to 14 liters per hour of liquid Minncare Cold Sterilant solution
- Bio-Decontamination of multiple linked rooms simultaneously is possible

#### Ultrafine Droplets

The Minncare Dry Fog 2 equipment is designed to produce ultrafine atomized droplets which will ensure even dispersion of the sterilant chemical vapors throughout the room.

- Controlled and consistently accurate droplet size
- Minimized risk of condensation
- Ensures penetration into normally inaccessible areas

## Technical Data

Product Specifications	
MinnCare Dry Fog® System	
Dry Fog Machine dimensions	16.5" x 13.0" x 72.0" (42 cm x 33 cm x 183 cm)
Shipping dimensions	19.7" x 19.7" x 47.2" (50 cm x 50 cm x 120 cm)
Dry Fog Machine weight	61.7 lbs. (28 Kg)
Shipping weight	77.1 - 110.2 lbs. (35-50 Kg)
Compressed air supply needs	75 psi (5 bar)
Minimum 70 liters/minute/spray nozzle air supply @ 5 bar	

Ordering Information		
Model	Description	Packaging
290-02-101	Dry Fog 2 Machine, 22L, one Spray Nozzle	per piece
290-02-150	Heavy Duty 2 Storage Case	per piece
290-01-034	MinnCare Dry Fog Remote Control Unit (U.S. version)	per piece
290-01-035	MinnCare Dry Fog Remote Control Unit (European version)	per piece
290-02-103	Dry Fog 2 Nozzle, 7.5µ	per piece
290-02-140	Dry Fog 2 Vertical Angle Spray Adaptor	per piece
290-02-141	Dry Fog 2 Maintenance Kit	per piece
290-02-119	Dry Fog 2 Extension Tube	per piece
290-01-031	Dry Fog Vapor Detection Deluxe Pump Kit	per piece
290-01-032	Dry Fog Hydrogen Peroxide detector tube	per 10
290-01-033	Dry Fog Acetic Acid detector tube	per 10

MinnCare® Cold Sterilant Ordering Information		
United States Part Number		Packaging
176-01-001	MinnCare Cold Sterilant (4 - 1 quart bottles)	4x1 qt
176-01-002	MinnCare Cold Sterilant (4 - 1 gallon jugs)	4x1 gal
Canadian Part Number		
78399-647	MinnCare Cold Sterilant (4 - 1 quart bottles)	4x1 qt
78399-646	MinnCare Cold Sterilant (4 - 1 gallon jugs)	4x1 gal
European Part Number		
176-01-125	MinnCare Cold Sterilant (2 - 5 liter bottles)	2x5 liters
176-01-121	MinnCare Cold Sterilant (2 - 10 liter bottles)	2x10 liters
176-01-129	MinnCare Cold Sterilant (6 - 1 kg bottles)	6x1 kg
Asia Pacific Part Number		
78397-983	MinnCare Cold Sterilant (2 - 5 liter bottles)	2x5 liters
78397-825	MinnCare Cold Sterilant (2 - 10 liter bottles)	2x10 liters
78397-229	MinnCare Cold Sterilant (6 - 1 kg bottles)	6x1 kg



## Minnicare® Mini Fog System

### A Modern Method to Enhance Small Space Disinfection.

The Mini Dry Fog system provides an easy-to-use, high technology solution for confined-space fogging. The combination of our highly effective Minnicare® Cold Sterilant chemical and our state-of-the-art Dry Fog delivery system enables users to rapidly and safely deliver Minnicare vapor to even the most complex areas. Its sanitary and autoclavable design permit its use in the most critical areas within pharmaceutical and other industries concerned with maintaining the utmost levels of sterility.

### Standard Features & Benefits

#### Short Process Time

Typically, the entire process can be completed in less than 3 hours, depending upon room size and ventilation system efficiency, compared to up to 3-5 days with some conventional systems.

- Substantially lower cleanroom downtime
- Regular use may contribute to maintaining low particulate levels due to the suppression of airborne particles by the droplets
- Lack of noise and ultrasonic vibration during use

#### Optimal Efficacy with Minnicare

Minnicare is a peracetic acid and hydrogen peroxide based proprietary chemistry developed by Minntech for optimized biocidal efficacy.

- EPA registered for fogging as part of normal cleaning and disinfection procedures
- Faster and safer to use than existing aldehyde based disinfectants
- Effective bactericide, fungicide, virucide and sporicide
- Fully biodegradable



#### Ultrafine Droplets

The Minnicare Dry Fog equipment is designed to produce fine droplets that average 7.5 microns in diameter which will ensure even dispersion of the Minnicare solution throughout the room.

- Controlled and consistently accurate droplet size
- Minimized risk of condensation
- Ensures penetration into normally inaccessible areas
- Dispersion of Minnicare vapor in all areas of room

#### Highly Flexible System

The system is easily adaptable to differing space dimensions and can be adjusted to reach all areas of a small confined space.

- Readily transportable and can be used in multiple locations
- Robust construction, with easy maintenance
- Does not require electrical connection
- Autoclavable design with Sanitary construction using 316L Stainless Steel for key components
- Single units are suitable for use in volumes up to 20 m<sup>3</sup> or a 700 ft<sup>3</sup> room and will disperse up to 500 ml of liquid Minnicare solution

## Technical Data

Product Specifications		
Mini Dry Fog System	Mini Dry Fog System (US Version)	Mini Dry Fog System (EU Version)
Dry Fog Machine dimensions	6.6" x 13.1" x 11.4" (16.8cm x 33.5cm x 29.0cm)	6.3" x 13" x 17.3" (16cm x 33cm x 44cm)
Shipping dimensions	14.6" x 11.8" x 8.7" (37cm x 30cm x 22cm)	15.4" x 11.8" x 9.1" (39cm x 30cm x 23cm)
Dry Fog Machine weight	9 lbs. (4.1 Kg)	9.3 lbs. (4.25 Kg)
Shipping weight	17.2 lbs. (53 Kg)	17.6 lbs. (8 Kg)
Compressed air supply needs	75 psi (5 bar)	75 psi (5 bar)
Minimum 2.0 scfm (56 liters/minute) air supply		

Ordering Information		
Model	Description	Packaging
290-01-061	Mini Dry Fog Machine with aluminum case	per piece
290-01-034	Minnicare Dry Fog Remote Control Unit (U.S. version)	per piece
290-01-035	Minnicare Dry Fog Remote Control Unit (European version)	per piece
290-01-031	Dry Fog Vapor Detection Deluxe Pump Kit	per piece
290-01-032	Dry Fog Hydrogen Peroxide detector tube	per 10
290-01-033	Dry Fog Acetic Acid detector tube	per 10

Minnicare® Cold Sterilant Ordering Information		
United States Part Number		Packaging
176-01-001	Minnicare Cold Sterilant (4 - 1 quart bottles)	4x1 qt
176-01-002	Minnicare Cold Sterilant (4 - 1 gallon jugs)	4x1 gal
Canadian Part Number		
78399-647	Minnicare Cold Sterilant (4 - 1 quart bottles)	4x1 qt
78399-646	Minnicare Cold Sterilant (4 - 1 gallon jugs)	4x1 ga
European Part Number		
176-01-125	Minnicare Cold Sterilant (2 - 5 liter bottles)	2x5 liters
176-01-121	Minnicare Cold Sterilant (2 - 10 liter bottles)	2x10 liters
176-01-129	Minnicare Cold Sterilant (6 - 1 kg bottles)	6x1 kg

## MinnCare® Dry Fog Technology Research Report: Environmentally Friendly Disinfection of a Pharmaceutical Cleanroom

### Introduction

With the growing need for microbiological clean environments, room disinfection is a critical part of maintaining a microbiologically clean environment for a variety of purposes: manufacturing, employee safety in research environments, patient safety in hospitals, and contamination control.

Cleanroom disinfection is a routine procedure in many pharmaceutical, biotech, cosmetic, and other microbiology industries. These industries are dependent on microbiologically clean areas primarily for production and R&D. Additionally, some industries are governed by regulatory bodies that impose standards for microbiological cleanliness and set requirements for regular, certified biodecontamination of certain areas. Pharmaceutical facilities have a number of areas that require regular disinfection procedures in order to provide a microbiologically clean environment. Typical biodecontamination procedures include:

- Annual shutdown biodecontamination
- Commissioning biodecontamination
- Decommissioning biodecontamination of areas used for pathogen work
- Eradication of problematic microorganisms from production lines and laboratory areas
- Emergency biodecontamination for accidental release or spillage of microorganisms
- Regular cleanroom biodecontamination
- Isolator and pass-through biodecontamination

A large pharmaceutical plant in the Midwest was investigating ways to achieve a higher level of system automation and integrity, as well as, improve the level of spores killed during a disinfection procedure. The plant had used two different types of disinfection, H<sub>2</sub>O<sub>2</sub> (hydrogen peroxide) and formaldehyde, and was not satisfied with either approach. Operating personnel decided to explore alternatives in order to achieve their requirements more effectively.

### Dry Fog Technology

After researching the available alternatives, the plant decided to investigate a dry fogging approach. The technology selected — the Minncare Dry Fog (DF) System — produces very fine droplets of disinfectant that are dispersed throughout a room. The disinfectant used by this system is a proprietary cold sterilant solution consisting of a stable mixture of peracetic acid and H<sub>2</sub>O<sub>2</sub> that is bactericidal, fungicidal, virucidal, and sporicidal. Table 1 compares the activity levels of peracetic acid, H<sub>2</sub>O<sub>2</sub>, and other biocides in treating common contaminants.

During the DF process, the humidity level of the room to be

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treated is first raised to 80%. Then the dry fog solution is evenly and completely dispersed in the room. A single DF unit can disinfect rooms up to 35,000 cubic feet (1,000 cubic meters) in size. Figure 1 shows a sample DF system setup for a 8,500- cubic-foot room.

The disinfectant droplets are only 7.5 microns in diameter, so they bounce off solid surfaces and resist the excessive condensation, possible corrosion, and surface wetting commonly associated with other fogging or manual cleaning procedures. The droplets eventually evaporate and the vapor penetrates normally in accessible areas resulting in a more thorough disinfection process. The chemical is fully biodegradable, requires an extremely short process time, and is much less corrosive than aldehyde-based materials.

### Auto-San Room Test

The immediate area of concern for the pharmaceutical plant was the auto-san (automatic sanitization) room, a staging area for disinfection of nonproduct contact parts and large equipment heading into the clean room. The plant was using a solution of H<sub>2</sub>O<sub>2</sub> sprayed via wet/fogging nozzles for sanitization in the auto-san room. The solution feed was set up in the staging chamber just outside the room with a line penetrating the wall to the nozzle. While the system was consistently achieving a 3-log or greater reduction of bacterial spores with the H<sub>2</sub>O<sub>2</sub> method, having to wet all of the surfaces led to concerns over the potential for corrosion and material compatibility issues. Also, handling the low-pH active H<sub>2</sub>O<sub>2</sub> required extensive safety precautions, and the overall method's efficiency in terms of total dispense, exposure, and exhaust timing was less than desirable. A test procedure was arranged for

Table 1: Activities of the most important biocides (Guyader, 1996)

Biocides	Bacteria		Mycobacteria	Spores	Moulds	Yeasts	Virus
	Gram -	Gram +					
Peracetic acid	+++	+++		++	++	++	++
Alcohols	++	++		0	++	++	+
Alcohol (70%)	++	++	0	+	+	++	+
Glutaraldehyde	+++	+++	++	+	+++	++	++
Quat Ammonium	+++	+	0	0	+	+	+
Chlorine	+++	+++	++	++	++	++	++
Hydrogen Peroxide	+++	+++		+	+	+	0
Iodine	+++	+++	++	++	++	++	++

\* Not active on Pseudomonas

the auto-san room, which was 27 cubic meters in size. Two sets of tests were run using two different levels of DF exposure time.

The goal of the plan was to demonstrate a point at which the DF achieved a 4- to 6 log reduction on biologic indicator (BI) spore strips. The use of bacterial endospores, typically *Geobacillus stearo-*

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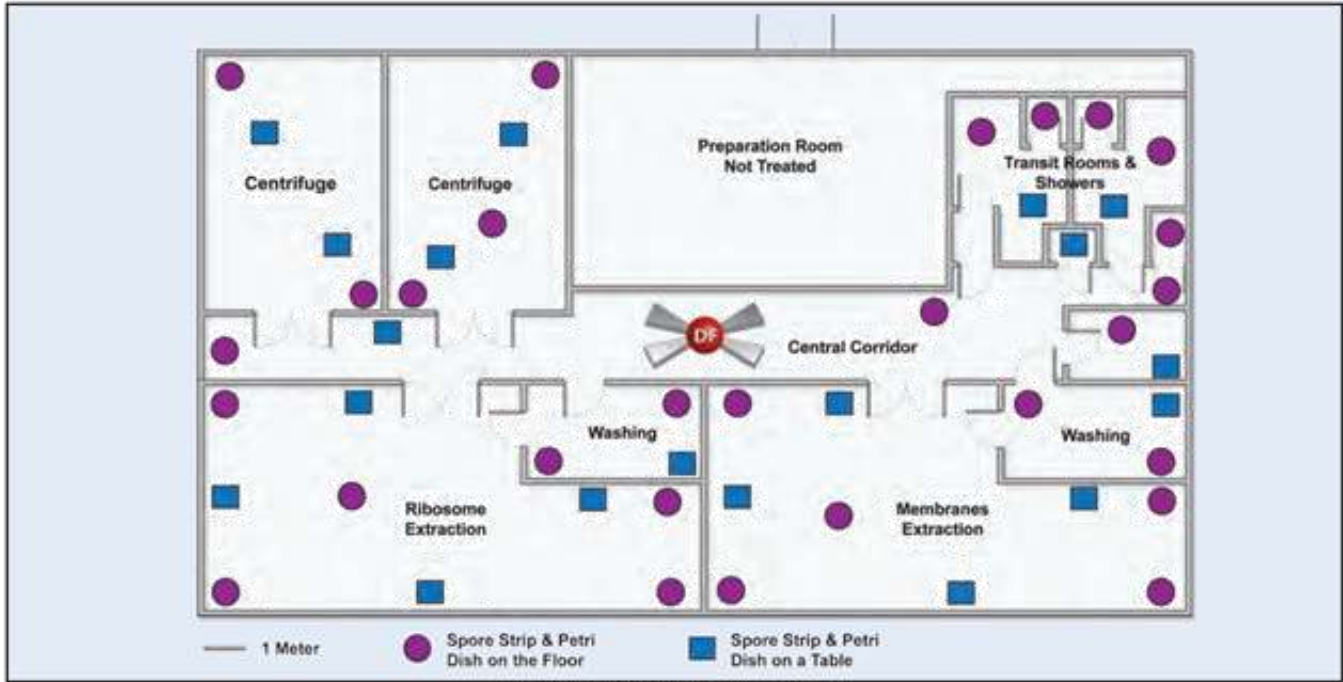


Figure 1: Dry fog room layout example

thermophilus, as a BI to measure the success of decontamination is a common standard. Overall results of testing showed that regardless of the concentration of the dry fog disinfectant and in as low as 15 minutes of contact time, a >6-log reduction was achieved on all BI indicators. Further, even with a reduced exhaust time versus the preexisting process, issues with corrosion and residual cleanup were eliminated. Based on the results of the DF test in the auto-san room, the plant decided to investigate using it in active pharmaceutical ingredient

#### API Production Area Test

(API) production areas. Previously, these areas were being disinfected — when returned to an aseptic state after facility shutdown — using a formaldehyde fog/spray. The procedure involved evacuating the building, remotely initiating spraying, and quarantining the building for several hours. Afterward, ventilation would be reintroduced and an additional one to two days were required to bring the formaldehyde concentrations back to the very low levels required by procedure, finally allowing reentry. Furthermore, after the building was deemed safe for reentry, extensive personnel protective equipment and significant monitoring were required to ensure that operators were not exposed to detectable levels of formaldehyde during subsequent manual cleaning and sanitization activities.

The test procedure with dry fog consisted of disinfecting a two story area of the building that included a stairwell and elevator shaft. The DF unit (see Figure 2) was positioned on the floor near the center of the room. Twelve 3-log BIs and 12 6-log BIs were placed around the room and on the ceiling. After a standard diffusion time and a

hold time of 1 hour, the HVAC was reintroduced. The disinfectant level dropped to a safe reentry point in less than 15 minutes, saving one to two days that would have been lost using formaldehyde treatment. Subsequent BI results showed an overall spore reduction of 6 logs at the monitored locations, a level of sanitization which easily surpassed the protocol requirements.

#### Conclusion

As a result of the demonstrations, the plant decided to use the DF technology for disinfection procedures going forward. Some of the benefits noted by the company were:

- More reliable and better efficacy (6 log reduction)
- Replacement of a hazardous chemical previously used (formaldehyde)
- Reduced downtime during the treatment procedure (typically 3 hours or less)
- Greatly reduced downtime for venting (compared to formaldehyde)
- Reduced procedure costs (compared to either H<sub>2</sub>O<sub>2</sub> or formaldehyde)
- Significantly reduced corrosion
- Fewer material compatibility issues
- Elimination of sanitization agent residue
- Elimination of post-sanitization manual cleanup

Those benefits ultimately translated into a better, faster, safer, and more environmentally friendly process that reduced labor and lowered operational costs.

## Actril® Fog System (AFS)

### Airborne Bio-Decontamination

Fogging technology using Actril® Cold Sterilant ready-to-use product naturally disinfects surfaces through vapor condensation.

The Actril Fog Dispenser is a specially designed device that fits on 1 gallon and 5 liter Actril containers to produce an Actril vapor which coats and disinfects any hard surface. The device fits on the top of a standard Actril bottle and uses an 8 mm or 5/16 inch diameter compressed air line supplied with compressed air (70 liters per minute @ 3 bar or 2.5 SCFM @ 45 PSI) to fog the Actril Cold Sterilant from the Actril Fog System. The Actril re-condensates on hard surfaces and destroys the existing micro-organisms. The fog system includes the fogging dispenser and a bottle cradle to prevent the bottle from tipping over during fogging. The system is capable of disinfecting room volumes up to 100M<sup>3</sup> (3531 Cubic Feet).

Actril Fog System P/N: 3025825

Actril Cold Sterilant (4 x 1 US gallon) P/N: 176-02-043

Actril Cold Sterilant (2 x 5 liter) P/N: 176-02-053



Note: Bottle shown is the European 5 liter bottle. AFS fits both the US one gallon and the European 5 liter version of the Actril Bottle.

## Actril Fog System Advantages

### Increased Effectiveness

- High level bio-decontamination
- Fast microbiological efficacy
- Destroys bacteria, mycobacteria, yeast, mold, virus and bacteria spores

### Easy and Safe to Use

- No manual spraying or wiping
- No human contact with chemical aerosols
- No residue left on surfaces

### Economical

- Low investment, no maintenance, minimal chemical usage

### Environmentally Friendly

- Minimal chemical required due to fogging action (recondensation)
- Actril is safe for the environment

### Multiple Applications

- Hospitals
- Animal Facilities
- Ambulances
- Schools & Locker Rooms
- Transportation Facilities
- Medical Clinics
- Health Clubs

## Actril Cold Sterilant Effectiveness

Actril Cold Sterilant is registered as a Sterilant.

The US Pharmacopoeia (USP, Second Supplement, General Information, 1072 Disinfectants & Antiseptics, p. 3792) defines a sterilant as: An agent that destroys all form of microbial life including fungi and virus and all forms of bacteria and their spores. Sterilants are liquid or vapor phase agents.

Actril Cold Sterilant is effective against the following organisms:

Organism Type	Organism		
Spores	Bacillus subtilis	Clostridium sporogenes	
Mycobacteria	Mycobacterium bovis		
Vegetative Bacteria	Pseudomonas aeruginosa	Salmonella choleraesuis	Staphylococcus aureus
Fungi	Trichophyton mentagrophytes		
Non-Lipid Small Virus	Polio virus Type 2		
Lipid Medium Virus	Herpes simplex Type 1,2	HIV (AIDS virus)	
Hepatitis B and C	No approved method to test for hepatitis B&C exists.*		

\* A direct test is unavailable; however, they are generally considered easier to kill than Polo viruses.

## Actril Cold Sterilant Material Compatibility

Actril Cold Sterilant is a proprietary mixture of 0.06% peracetic acid and 1.0% hydrogen peroxide. Actril Cold Sterilant has been tested and shown to be compatible with material coupons made from the materials shown below:

### Metals

Stainless Steel (316)  
Aluminum Alloy (6061)

### Plastics

Polypropylene  
Perfluoroalkoxy (PFA)  
Acrylonitrile-butadienestyrene (ABS)  
Polyethylene  
Polyvinylchloride (PVC)  
Polycarbonate  
Tygon

### Elastomer

Silicone rubber

Other materials not listed should be tested for compatibility prior to use.

## Safety & the Environment

Actril Cold Sterilant, is extremely eco-friendly because Actril's raw materials are not listed as carcinogenic or mutagenic materials, does not produce toxic vapors, and is safe for the environment. It is completely biodegradable and will decompose into oxygen, water, and acetic acid.\*

\* Unused Actril Cold Sterilant is acidic and requires normal neutralization as specified by local regulations. Actril has a pH of 1.5 to 2.0. Actril is a registered trademark of Minntech Corporation, a Cantel Medical Company.



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Tested.  
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We solve problems  
with confidence  
and creativity.



Monitoring Products for Dry Heat

**DRY**

Steam-Formaldehyde

**FORM**

Chlorine Dioxide

**CLO2**

## Biological Indicators for Dry Heat

### Inoculated Carriers & Biological Indicators

Crosstex manufactures a comprehensive line of Inoculated Carriers and Biological Indicators (BIs) for use in monitoring Dry Heat sterilization processes. Our most popular inoculated carriers and biological indicators are packaged using state of the art equipment, which provides assurance that each glassine pouch contains a biological indicator.

- Convenient shelf packages of 100 units per box
- Products are accompanied by a Certificate of Analysis and are certified with population, purity, and resistance characteristics (*D* value, *z* value, survival and kill where applicable)

### Biological Indicators – ISO 11138-4 Compliant

Crosstex manufactures a biological indicator for Dry Heat sterilization which is compliant with ISO 11138-4. The BI consists of a 7 mm x 38 mm filter paper strip inoculated with *Bacillus atrophaeus* spores, packaged in a white glassine pouch. The configuration offers an increased *D* value at 160°C of not less than 2.0 minutes meeting the requirements for dry heat resistance as outlined in ISO 11138-4.

- Place BIs into the most difficult area of the sterilizer or device/article to be sterilized. In general, a minimum of 10 BIs are utilized in each cycle
- Packaging allows for easy placement in sterilizer or device/article and transfer post-exposure

### Biological Indicators – ISO 11138-4 Compliant

*Bacillus atrophaeus* Cell Line 9372  
24 month shelf life

Crosstex Code	Population	Quantity
BG-106DH	10 <sup>6</sup>	100/box

### Traditional Spore Strips

Consist of inoculated filter paper, each 7 mm x 38 mm, individually packaged in easy-to-handle glassine pouches.

- The strips can be easily removed from the glassine pouch by tearing or peeling the pouch open for transfer to culture media or challenge device assembly
- Compliant with ISO 11138-1



### Traditional Spore Strips

*Bacillus atrophaeus* Cell Line 9372  
24 month shelf life

Crosstex Code	Population	Quantity
BG-104	10 <sup>4</sup>	100/box
BG-105	10 <sup>5</sup>	100/box
BG-106	10 <sup>6</sup>	100/box

### Mini Spore Strips

Consist of inoculated filter paper, each 2 mm x 10 mm, packaged in a variety of options. The small size of the Mini Spore Strips allows them to fit into areas of a device where standard sized spore strips cannot be used, such as within a syringe barrel, inside tubing or under a cap.

- Crosstex Mini Spore Strips are available packaged in glassine envelopes of two sizes: a larger envelope 25 mm x 50 mm (STN-062) or a mini glassine envelope 25 mm x 25 mm (STN-062MG)
- The product is also available as an inoculated carrier in bulk (no glassine packaging - STN-062B)
- Compliant with ISO 11138-1



### Mini Spore Strips

*Bacillus atrophaeus* Cell Line 9372  
30 month shelf life

Crosstex Code	Packaging	Population	Quantity
STN-062	Glassine envelopes	10 <sup>6</sup>	100/box
STN-062B	Bulk	10 <sup>6</sup>	100/box
STN-062MG	Mini glassine envelopes	10 <sup>6</sup>	100/box



## Biological Indicators for Dry Heat

### Spore Discs

Crosstex Spore Discs are available in two different sizes, 6 mm and 3 mm diameters. The discs are designed to be utilized as an inoculated carrier for placement directly into areas of a device which are the most difficult to sterilize.



- The Inoculated Carriers are packaged in easy-to-access and handle bulk packaging
- Crosstex Spore Discs will fit into small areas of a device where a standard-sized spore strip cannot be used, such as within a syringe barrel, inside tubing and vials or under a cap
- Compliant with ISO 11138-1



### Spore Discs

*Bacillus atrophæus* Cell Line 9372  
24 month shelf life (BG-106D) / 30 month shelf life (DN18-06)

Crosstex Code	Disc Diameter	Packaging	Population	Quantity
BG-106D	6 mm	Bulk	10 <sup>6</sup>	100/box
DN18-06	3 mm	Bulk	10 <sup>6</sup>	100/box

### Spore Threads

- Ideal for use in tubing, lumens and other devices/instruments where larger BIs and carriers cannot be utilized
- Compliant with ISO 11138-1

### Spore Threads

*Bacillus atrophæus* Cell Line 9372  
24 month shelf life

Crosstex Code	Description	Packaging	Population	Quantity
THN-06	Cotton Thread, 25 mm x 0.1 mm	Bulk	10 <sup>6</sup>	100/box
THN-06P	Cotton Thread, 25 mm x 0.1 mm	Glassine	10 <sup>6</sup>	100/box



### Prepared Culture Media

Crosstex Prepared Culture Media consists of an exclusively formulated Trypticase® Soy Broth (TSB) modified with pH indicator. A reduced incubation time of 48 hours for Dry Heat sterilization has been validated when Crosstex *Bacillus atrophæus* Cell Line 9372 Biological Indicators are used in conjunction with Crosstex's Prepared Culture Media.

- Visually distinct results from green to yellow in a minimum of 48 hours
- 13 mm x 100 mm flat bottom tubes of Type I borosilicate glass with screw caps
- Each lot is accompanied by a Certificate of Analysis and is certified with growth promotion capabilities using *Bacillus atrophæus* Cell Line 9372

### Prepared Culture Media

12 month shelf life

Crosstex Code	Volume	Quantity
GMBTB-100	5 mL	100 tubes/box



### Spore Suspensions

Crosstex manufactures Spore Suspensions utilized in Dry Heat sterilization processes. The Spore Suspensions are pure suspensions of spores with known resistance characteristics and a variety of population levels standardized per 0.1 mL. The Spore Suspensions allow for direct inoculation of products, typically to verify sterility of devices where a traditional biological indicator spore strip cannot be used.

They can also be used for a variety of other microbiological tests including cleaning effectiveness studies, Bioburden percent recovery and Bacteriostasis/Fungistasis (BF) testing.

- Each vial contains 10 mL of suspension. Diluent contains 20% ethanol
- Pharmaceutical grade glass vials with screw cap and septum
- Spore Suspensions require storage under refrigerated conditions (2°C to 8°C)
- ISO 11138-1 Compliant



### Spore Suspensions

*Bacillus atrophæus* Cell Line 9372  
24 month shelf life

Crosstex Code	Population per 0.1 mL
VBA-102	10 <sup>2</sup>
VBA-103	10 <sup>3</sup>
VBA-104	10 <sup>4</sup>
VBA-105	10 <sup>6</sup>
VBA-106	10 <sup>6</sup>
VBA-107	10 <sup>7</sup>
VBA-108	10 <sup>8</sup>









## Chemical Indicators for Dry Heat

### Chemical Process Indicators

Crosstex Dry Heat Chemical Process Indicators (CPIs) meet the requirements of Crosstex's Quality System (ISO 13485) and have been validated per standard cycles outlined in ISO and USP for Depyrogenation processes. Our Chemical Process Indicators provide a fast and consistent visual check on items that were exposed to Dry Heat processes.

### Chemical Process Indicators

24 month shelf life

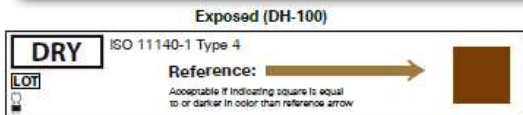
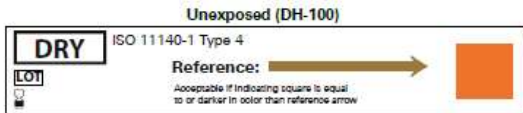
Crosstex Code	Description	Indicators Per Roll	Unexposed	Exposed
 CPI-DH01	Circle Indicator Label 12.7 mm (Dry Heat) orange to brown ( $\leq 180^{\circ}\text{C}$ )	1,000		
 CPI-DP1	Circle Indicator Label 12.7 mm (Depyrogenation) High temperature or Depyrogenation - pink to violet/dark brown ( $\leq 250^{\circ}\text{C}$ )	500		

36 month shelf life

Crosstex Code	Description	Indicators Per Roll	Unexposed	Exposed
DIL -1000	Circle Indicator Label 19 mm	1,000		
DTL-125	Indicator Label with operator and date 19 mm x 32 mm	125		

### Chemical Indicator Strips

Crosstex Dry Heat Chemical Indicator Strips are innovative indicator strips which demonstrate exceptional performance and are customized for the most widely utilized Dry Heat processes. Crosstex evaluates the performance of every lot to ensure consistent and reliable performance. Each shipment includes a Certificate of Analysis for assurance of product quality and performance.



- Lead & latex free
- Irreversible color transition from orange to brown
- ISO 11140-1 Type 4 Compliant



- Provides a distinct color change from green to dark when processed
- Writable strip for record keeping
- ISO 11140-1 Type 1 Compliant

### Chemical Indicator Strips

36 month shelf life

Crosstex Code	Description	Dimensions	Quantity
DH-100	Chemical Indicator Strip – Type 4	115 mm x 19 mm	100/bag
DIS-100	Chemical Indicator Strip – Type 1	100 mm x 16 mm	100/box

## Packaging for Dry Heat

### Nylon Self-Seal Sterilization Pouches and Roll Stock Tubing

Crosstex Nylon Self-Seal Sterilization Pouches and Roll Stock Tubing are manufactured for use in Dry Heat processes up to 420°F (215°C). Nylon material is clear, strong and puncture resistant, maintaining a durable barrier for instrumentation until point of use.

- Pouches have built-in adhesive tape which eliminates the need for a heat sealer or indicator tape
- Each pouch is notched for ease of opening after processing, and complimentary external chemical indicator labels are included
- Roll stock tubing is designed to be cut to any length prior to packaging and then mechanically sealed or taped closed
- Latex free

### Nylon Self-Seal Sterilization Pouches

Crosstex Code	Dimensions	Quantity
NSP-400	2" x 10" (5 x 25 cm)	100/bx
NSP-405	3" x 10" (8 x 25 cm)	100/bx
NSP-410	4" x 10" (10 x 25 cm)	100/bx
NSP-420	7" x 10.5" (18 x 25 cm)	100/bx
NSP-430	9.5" x 13" (24 x 25 cm)	100/bx



### Nylon Sterilization Tubing

Crosstex Code	Dimensions	Quantity
SN2	2" x 100 ft (5 cm x 30 m)	16 rolls/cs
SN3	3" x 100 ft (8 cm x 30 m)	12 rolls/cs
SN4	4" x 100 ft (10 cm x 30 m)	12 rolls/cs
SN6	6" x 100 ft (15 cm x 30 m)	12 rolls/cs
SI2	2" x 100 ft (5 cm x 30 m) w/ Process Indicator	16 rolls/cs
SI3	3" x 100 ft (8 cm x 30 m) w/ Process Indicator	12 rolls/cs
SI4	4" x 100 ft (10 cm x 30 m) w/ Process Indicator	12 rolls/cs
SI6	6" x 100 ft (15 cm x 30 m) w/ Process Indicator	12 rolls/cs



## Biological Indicators for Chlorine Dioxide

### Biological Indicators - Traditional Spore Strips

Crosstex manufactures Biological Indicators (BIs) for use in monitoring Chlorine Dioxide sterilization processes. Our BIs are manufactured using precise care, which provides assurance that each pouch contains a biological indicator consistent in population and purity.

- Consist of inoculated filter paper, each 7 mm x 38 mm, individually packaged in easy-to-handle Tyvek®/Tyvek® pouches.
- The strips can be easily removed from the pouch for transfer to culture media
- Convenient shelf packages of 100 units per box
- Products are accompanied by a Certificate of Analysis and are certified with population and purity
- Compliant with ISO 11138-1



### Traditional Spore Strips

*Geobacillus stearothermophilus* Cell Line 7953  
30 month shelf life

Crosstex Code	Packaging	Population	Quantity
TCDS-06	Tyvek®/ Tyvek®	10 <sup>6</sup>	100/box

Tyvek® is a registered trademark of E.I. du Pont de Nemours and Company.



## Biological & Chemical Indicators for Steam-Formaldehyde

### Biological Indicators - Traditional Spore Strips

Crosstex manufactures Biological Indicators (BIs) for use in monitoring Steam-Formaldehyde sterilization processes. Our BIs are manufactured using precise care, which provides assurance that each glassine pouch contains a biological indicator consistent in population and purity.

- Consist of inoculated filter paper, each 7 mm x 38 mm, individually packaged in easy-to-handle glassine pouches
- The strips can be easily removed from the glassine pouch by tearing open for transfer to culture media
- Convenient shelf packages of 100 units per box
- Products are accompanied by a Certificate of Analysis
- Compliant with ISO 11138-1



### Traditional Spore Strips

*Geobacillus stearothermophilus* Cell Line 7953  
24 month shelf life

Crosstex Code	Population	Quantity
STSF-05	10 <sup>6</sup>	100/box
STSF-06	10 <sup>8</sup>	100/box

### Chemical Process Indicators

Crosstex Steam-Formaldehyde Chemical Process Indicators (CPIs) are manufactured to meet performance specifications as outlined in ISO 11140-1 Sterilization of health care products - Chemical indicators - Part 1: General requirements, for Type 1 Process Indicators. Our CPIs provide a fast and consistent visual check on items that were sterilized by Steam-Formaldehyde.

- Consistent and irreversible color transition from violet to green
- No light sensitivity issues
- Permanent pressure-sensitive adhesive
- Room temperature storage (15°C to 30°C)
- Each shipment is accompanied by a Certificate of Analysis to ensure product quality and consistency



### Chemical Process Indicators

60 month shelf life

Crosstex Code	Description	Indicators Per Roll	Unexposed	Exposed
CPI-SF01	Circle Indicator Label 12.7 mm	5,000		

### Chemical Indicator Strips

Crosstex Steam-Formaldehyde Chemical Indicator Strips demonstrate exceptional performance and are customized for the most widely utilized Steam-Formaldehyde sterilization processes and provide a distinct color change. Crosstex evaluates the performance of every lot to ensure consistent and reliable performance.

- Indicator turns from red to green when processed
- Each shipment includes a Certificate of Analysis for assurance of product quality and performance
- ISO 11140-1 Type 4 Compliant



### Chemical Indicator Strip

24 month shelf life

Crosstex Code	Description	Dimensions	Quantity
SFS-250	Chemical Indicator Strip – Type 4	100 mm x 16 mm	250/box

Colors shown are representations of printed ink initial and signal colors but may vary from actual use.



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Reliable.  
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Your most trusted  
partner for sterilization  
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Monitoring Products for Steam Sterilization

STEAM

### Self-Contained Biological Indicators

Crosstex Self-Contained Biological Indicators (SCBIs) for monitoring Steam sterilization processes provide fast, visible, consistent and reliable results offering peace of mind for assurance of effective steam sterilization processing. Use of Crosstex's SCBIs reduce the possibility of contamination and minimizes the potential for false positives associated with post-exposure transfer.

- Visually distinct positive results from purple to yellow
- Chemical Indicator on label provides instant indication of exposure
- Saves time by eliminating aseptic culturing required with traditional spore strips
- Compliant with ISO 11138-1 and 11138-3

#### SporView® SCBIs

Consist of a thermoplastic vial and a brown cap, a crushable glass ampule with an exclusively formulated Trypticase® Soy Broth (TSB) modified with pH indicator, and a disc inoculated with *Geobacillus stearothermophilus* spores.

- Reduced incubation time of 24 hours
- Smaller size, 8.4 mm x 45.5 mm, designed to fit in challenging sterilization areas



#### SporView®10 SCBIs

Consist of a thermoplastic vial and a brown cap, a crushable glass ampule with an exclusively formulated Trypticase® Soy Broth (TSB) modified with pH indicator, and a disc inoculated with *Geobacillus stearothermophilus* spores

- 10 hour final readout using standard dry block incubator (55°C to 60°C)
- Reliable biological readout without the use of enzyme based technology or specific and specialized incubators or monitoring devices
- Unique packaging insert keeps SCBIs in upright position and allows for quick reference to the number of units remaining in the package
- Smaller size, 8.4 mm x 45.5 mm, designed to fit in challenging sterilization areas



#### SporView® SCBIs

*Geobacillus stearothermophilus* Cell Line 7953  
24 month shelf life

Crosstex Code	Population	Incubation Time	Quantity
SCS-100	10 <sup>6</sup>	24 hours	100/box
SCS-106	10 <sup>8</sup>	24 hours	100/box

#### SporView®10 SCBIs

*Geobacillus stearothermophilus* Cell Line 7953  
18 month shelf life

Crosstex Code	Population	Incubation Time	Quantity
SVT-050	10 <sup>6</sup>	10 hours	50/box
SVT-056	10 <sup>8</sup>	10 hours	50/box

#### Traditional SCBIs

Consist of a durable polycarbonate vial with cap, a crushable glass ampule with an exclusively formulated Trypticase® Soy Broth (TSB) modified with pH indicator, and a disc inoculated with *Geobacillus stearothermophilus* spores.

- Reduced incubation time of 24 hours
- Heavy duty construction allows for exposures under extreme conditions without concern of causing damage to the SCBI
- Larger size, 13 mm x 61 mm, fits directly into auto-clave racks/baskets
- Unique packaging insert keeps SCBIs in upright position and allows for quick reference to the number of units remaining in the package



#### Traditional SCBIs

*Geobacillus stearothermophilus* Cell Line 7953  
24 month shelf life

Crosstex Code	Population	Incubation Time	Quantity
SCS-05	10 <sup>6</sup>	24 hours	50/box
SCS-06	10 <sup>8</sup>	24 hours	50/box



## Biological Indicators

### Spore Ampules

Crosstex Spore Ampules are ideal for use in validation and routine monitoring of liquid steam sterilization cycles. Spore Ampules are manufactured using hermetically sealed Type I borosilicate glass containing an exclusively formulated Trypticase® Soy Broth (TSB) modified with pH indicator, and *Geobacillus stearothermophilus* spores. No activation is required; simply expose Spore Ampules to the sterilization process and incubate.

- Reduced incubation time of 48 hours
- Clear, visible results as growth is evident by turbidity and/or a color shift of the media from purple to yellow
- Saves time by eliminating aseptic culturing required with traditional spore strips
- Unique packaging insert keeps Ampules in upright position and allows for quick reference to the number of units remaining
- Storage under refrigerated conditions (2°C to 8°C) is required. Do not freeze
- Compliant with ISO 11138-1 and 11138-3 (population 10<sup>6</sup> or greater)

### 1 mL Spore Ampules

- Spore Ampules are approximately 58 mm in length and 10.8 mm in diameter
- Each snap top ampule is imprinted with lot number
- Negative Controls (SA1-NC-10) are available in convenient packages of 10 per box



### 1 mL Spore Ampules

*Geobacillus stearothermophilus* Cell Line 7953  
24 month shelf life

Crosstex Code	Population	Volume	Quantity
SA1-15-04	10 <sup>4</sup>	1 mL	15/box
SA1-50-04	10 <sup>4</sup>	1 mL	50/box
SA1-15-05	10 <sup>5</sup>	1 mL	15/box
SA1-50-05	10 <sup>5</sup>	1 mL	50/box
SA1-15-06	10 <sup>6</sup>	1 mL	15/box
SA1-50-06	10 <sup>6</sup>	1 mL	50/box

### 1 mL Negative Control Ampules

24 month shelf life

Crosstex Code	Volume	Quantity
SA1-NC-10	1 mL	10/box

### 0.4 mL Mini Spore Ampules

- Mini Spore Ampules are approximately 32 mm in length and 6.4 mm in diameter
- Small size allows for placement in areas where the larger 1 mL ampule will not fit
- Mini Ampules are sold in kits which include negative controls



### 0.4 mL Mini Spore Ampules

*Geobacillus stearothermophilus* Cell Line 7953  
24 month shelf life

Crosstex Code	Population	Volume	Quantity
OS1-50-06	10 <sup>6</sup>	0.4 mL	50/box + 5 negative controls



### Digital Dry Block Incubators

The Crosstex Digital Dry Block Incubator is designed for convenient and reliable incubation of 1 mL Spore Ampules, SporView® SCBIs, SporView®10 SCBIs and Traditional SCBIs.

- The electronically-heated aluminum block holds up to 10 units
- 13 mm well size
- Temperature and incubation time are displayed digitally
- Adjustable temperature (5°C to 70°C) and incubation time (0 to 99h 59m)
- Reaches the set point temperature in 15 minutes or less
- Transparent lid included to ensure consistent temperature and to protect the units
- 12 month limited warranty



### Digital Dry Block Incubators

Crosstex Code	Voltage	Plug Type
INC-13A	110-220V	North & South America
INC-13E	110-220V	Europe
INC-13U	110-220V	United Kingdom
INC-13AC	110-220V	Australia & China

### Standard Dry Block Incubators

The Crosstex Standard Dry Block Incubators are available with both 11 mm and 13 mm well sizes. The 11 mm well size option (NDB-060) is designed for use with SporView® and SporView®10 SCBIs. The 13 mm well size option (NDB-056) is designed for use with our Traditional SCBIs and Prepared Culture Media tubes.

- Compact design allows for minimal counter space to be utilized
- Aluminum block holds up to 15 units
- The 11 mm well size options come with a built-in vial crusher
- 5 year limited warranty



### Standard Dry Block Incubators

Crosstex Code	Temperature	Well Size	Voltage	Plug Type
NDB-060	55°C to 60°C	11 mm	110V	North & South America
NDB-060-E	55°C to 60°C	11 mm	220V	Europe
NDB-060-A	55°C to 60°C	11 mm	220V	Australia & China
NDB-056	60°C	13 mm	110V	North & South America

### Prepared Culture Media

Crosstex Prepared Culture Media consists of an exclusively formulated Trypticase® Soy Broth (TSB) modified with pH indicator. A reduced incubation time of 24 hours for steam sterilization has been validated when Crosstex Biological Indicator Spore Strips and Discs are used in conjunction with Crosstex's Prepared Culture Media.

- Visually distinct results from purple to yellow in a minimum of 24 hours
- 13 mm x 100 mm flat bottom tubes of Type I borosilicate glass with screw caps
- Each lot is accompanied by a Certificate of Analysis and is certified with growth promotion capabilities using *Geobacillus stearothermophilus* Cell Line 7953



### Prepared Culture Media

12 month shelf life

Crosstex Code	Volume	Quantity
GMBCP-100	5 mL	100 tubes/box

## Biological Indicators

### Inoculated Carriers & Biological Indicators

Crosstex manufactures a full line of Inoculated Carriers and Biological Indicators (BIs) for use in monitoring Steam sterilization processes. Our most popular inoculated carriers and biological indicators are manufactured using state of the art equipment, which provides assurance that each glassine pouch contains a biological indicator consistent in population, purity and dimension.

- Convenient shelf packages of 100 units per box
- Products are accompanied by a Certificate of Analysis and are certified with population, purity, and resistance characteristics (*D* value, *z* value, survival and kill where applicable)
- Compliant with ISO 11138-1 and 11138-3

### Traditional Spore Strips

Consist of inoculated filter paper, each 7 mm x 38 mm, individually packaged in easy-to-handle glassine pouches.

- The strips can be easily removed from the glassine pouch by tearing or peeling the pouch open for transfer to culture media or challenge device assembly
- Crosstex offers both *Geobacillus stearothermophilus* for monitoring processes of 121°C and higher and *Bacillus subtilis* strips for monitoring low temperature steam sterilization processes



### Traditional Spore Strips

*Geobacillus stearothermophilus* Cell Line 7953  
24 month shelf life

Crosstex Code	Population	Quantity
BS-104	10 <sup>4</sup>	100/box
BS-105	10 <sup>6</sup>	100/box
BS-106	10 <sup>8</sup>	100/box

*Bacillus subtilis* Cell Line 5230  
15 month shelf life

Crosstex Code	Population	Quantity
BS52306	10 <sup>8</sup>	100/box

### Mini Spore Strips

Consist of inoculated filter paper, each 2 mm x 10 mm, packaged in a variety of options. The small size of the Mini Spore Strips allows them to fit into areas of a device where standard sized spore strips cannot be used, such as within a syringe barrel, inside tubing or under a cap.

- Crosstex Mini Spore Strips are available packaged in glassine envelopes of two sizes: a larger envelope 25 mm x 50 mm (STS-062) or a mini glassine envelope 25 mm x 25 mm (STS-062MG)
- The product is also available as an inoculated carrier in bulk (no glassine packaging – STS-062B)
- Population levels other than 10<sup>8</sup> are available upon request



### Mini Spore Strips

*Geobacillus stearothermophilus* Cell Line 7953  
30 month shelf life

Crosstex Code	Packaging	Population	Quantity
STS-062	Glassine envelopes	10 <sup>8</sup>	100/box
STS-062B	Bulk	10 <sup>8</sup>	100/box
STS-062MG	Mini glassine envelopes	10 <sup>8</sup>	100/box



## Spore Discs

Crosstex Spore Discs are available in two sizes, 6 mm and 3 mm diameters. The discs are designed to be utilized as inoculated carriers for placement directly into areas of a device which are the most difficult to sterilize.

- The Inoculated Carriers are packaged in easy-to-access and handle bulk packaging
- Crosstex Spore Discs will fit into small areas of a device where a standard-sized spore strip cannot be used, such as within a syringe barrel, inside tubing and vials or under a cap
- Compliant with ISO 11138-1



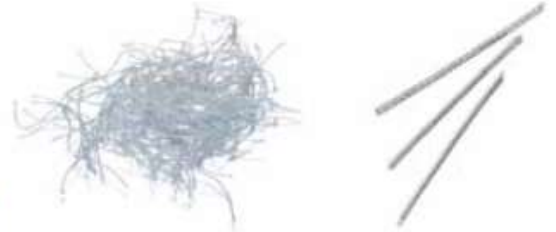
### Spore Discs

*Geobacillus stearothermophilus* Cell Line 7953  
24 month shelf life (BS-106D) / 30 month shelf life (DS18-06)

Crosstex Code	Disc Diameter	Packaging	Population	Quantity
BS-106D	6 mm	Bulk	10 <sup>8</sup>	100/box
DS18-06	3 mm	Bulk	10 <sup>8</sup>	100/box

## Spore Threads & Spore Wires

- Ideal for use in tubing, lumens and other devices/instruments where larger BIs and carriers cannot be utilized
- Crosstex's manufacturing process is designed to ensure that the entire length of the threads and wires contains a consistent number of spores
- Spore Wires have a rigid structure which allows for easy insertion and removal from a device
- The steel construction of our Spore Wires does not absorb moisture which is ideal when there is condensation within the lumen
- Compliant with ISO 11138-1



### Spore Threads & Spore Wires

*Geobacillus stearothermophilus* Cell Line 7953  
15 month shelf life (Threads) / 19 month shelf life (Wires)

Crosstex Code	Description	Packaging	Population	Quantity
THS-05	Cotton Thread 25 mm x 0.1 mm	Bulk	10 <sup>8</sup>	100/box
THS-06	Cotton Thread 25 mm x 0.1 mm	Bulk	10 <sup>8</sup>	100/box
THS-06P	Cotton Thread 25 mm x 0.1 mm	Glassine	10 <sup>8</sup>	100/box
SWS-06	Braided Steel 40 mm x 1.5 mm	Bulk	10 <sup>8</sup>	100/box



## Biological Indicators

### Spore Suspensions

Crosstex manufactures a wide range of Spore Suspensions utilized in Steam sterilization processes. The Spore Suspensions are pure suspensions of spores with known steam resistance characteristics and a variety of population levels standardized per 0.1 mL. The Spore Suspensions allow for direct inoculation of products, typically to verify sterility of devices where a traditional biological indicator spore strip cannot be used. They can also be used for a variety of other microbiological tests including cleaning effectiveness studies, Bioburden percent recovery and Bacteriostasis/Fungistasis (BF) testing.

- Each vial contains 10 mL of suspension. Diluent contains 20% ethanol
- Pharmaceutical grade glass vials with screw cap and septum
- A variety of organisms including *Geobacillus stearothermophilus* and *Bacillus subtilis* (Cell Lines 6633 and 5230) for low temperature processes (<121°C)
- Spore Suspensions require storage under refrigerated conditions (2°C to 8°C)
- Each vial of Spore Suspension is accompanied by a Certificate of Analysis detailing the source, assayed population, resistance characteristics on paper carrier and expiration date
- ISO 11138-1 Compliant



### Spore Suspensions

*Geobacillus stearothermophilus* Cell Line 7953  
24 month shelf life

Crosstex Code	Population per 0.1 mL
VGS-102	10 <sup>2</sup>
VGS-103	10 <sup>3</sup>
VGS-104	10 <sup>4</sup>
VGS-105	10 <sup>5</sup>
VGS-106	10 <sup>6</sup>
VGS-107	10 <sup>7</sup>
VGS-108	10 <sup>8</sup>

*Bacillus subtilis* Cell Line 5230  
15 month shelf life

Crosstex Code	Population per 0.1 mL
US52304	10 <sup>4</sup>
US52305	10 <sup>5</sup>
US52306	10 <sup>6</sup>
US52307	10 <sup>7</sup>
US52308	10 <sup>8</sup>

*Bacillus subtilis* Cell Line 6633  
14 month shelf life

Crosstex Code	Population per 0.1 mL
SBS-04	10 <sup>4</sup>
SBS-05	10 <sup>5</sup>
SBS-06	10 <sup>6</sup>
SBS-07	10 <sup>7</sup>
SBS-08	10 <sup>8</sup>





### Chemical Process Indicators

Crosstex Steam Chemical Process Indicators (CPIs) meet performance specifications as outlined in ISO 11140-1 Sterilization of health care products - Chemical indicators - Part 1: General requirements, for Type 1 Process Indicators. Our Chemical Process Indicators provide a fast and consistent visual check on items that were sterilized by steam.







- Consistent and irreversible color transition
- No light sensitivity issues
- Permanent pressure-sensitive adhesive
- Room temperature storage (15°C to 30°C)
- Each shipment is accompanied by a Certificate of Analysis to ensure product quality and consistency

### Chemical Process Indicators

#### 24 month shelf life

Crosstex Code	Description	Indicators Per Roll	Unexposed	Exposed
CPI-S01	Circle Indicator Label 12.7 mm	5,000		
SP-S05	Label with Indicator 64 mm x 38 mm	1,000		

#### 36 month shelf life

Crosstex Code	Description	Indicators Per Roll	Unexposed	Exposed
SIL-1000	Circle Indicator Label 19 mm	1,000		
SGL-1000	DUAL™ Circle Indicator Label 19 mm (for use in both Steam and EO)	1,000		
STL-250	Indicator Label with operator and date 19 mm x 32 mm (0.75" x 1.25")	250		

Colors shown are representations of printed ink initial and signal colors but may vary from actual use.



## Chemical Indicators

### Chemical Indicators, Integrators and Emulators

Crosstex manufactures a large range of Chemical Indicators, Integrators and Emulators used for Steam sterilization. Our indicators demonstrate exceptional performance and are customized for the most widely used steam sterilization processes.

- Room temperature storage (15°C to 30°C)
- Each shipment includes a Certificate of Analysis for assurance of product quality and performance

#### EmPlus 134™ Emulators – Type 6

- For use in pre-vacuum steam sterilizers operating at 134°C for 3.5 minutes or longer
- Indicator turns from green to brown when sterilizer performs as directed
- Manufactured free of latex, lead and heavy metals
- Reacts to all critical variables (time, temperature and steam) for a specified sterilization cycle
- Plastic laminated
- ISO 11140-1 Type 6 Compliant



#### EmPlus Emulators – Type 6

- Immediate read-out with wicking style movement
- Easy to interpret
- Reacts to all three parameters of sterilization (time, temperature, saturated steam) at 132°C for 4 minutes
- ISO 11140-1 Type 6 Compliant

#### STEAMPlus™ Sterilization Integrators – Type 5

- Immediate read-out with wicking style movement
- Reacts to all three parameters of sterilization (time, temperature, saturated steam)
- Operation range 121°C to 135°C
- FDA cleared as equivalent in performance to a biological indicator
- ISO 11140-1 Type 5 Compliant

Unexposed  
Exposed – Pass  
Exposed – Fail



#### 8" Steam Indicator Strips – Type 4

- Color transition from blue to dark
- 8" strips can be used for larger packs or torn in half at perforation for smaller packs
- Laminated option available (SIL-250-L)
- ISO 11140-1 Type 4 Compliant



#### 4" Steam Indicator Strips – Type 4

- Irreversible color transition from blue to dark
- ISO 11140-1 Type 4 Compliant



## Chemical Indicators

### 8" DUAL™ Monitor Strips – Type 1

- Color transition from cream to orange in EO and cream to dark brown in Steam
- Designed to be used for both Steam and EO thereby reducing inventory, is error-free and saves money over single process indicators
- 8" strips can be used for larger packs or torn in half at perforation for smaller packs
- ISO 11140-1 Type 1 Compliant



### Chemical Indicator Pen

Chemical indicator pen allows users to identify and monitor items that are steam processed. Ink changes color from black to red when processed. Works on nonporous surfaces (i.e. metal, glass or plastic).

## Chemical Indicators, Integrators and Emulators

Crosstex Code	Description	Type	Dimensions	Quantity
EMP2503	EmPlus 134™ Emulator	Type 6	101 mm x 13 mm (4" x 0.50")	250/bag
EMP-1004	EmPlus Emulator	Type 6	101 mm x 19 mm (4" x 0.75")	1000/bag
SSI-100	STEAMPlus™ Integrator	Type 5	101 mm x 19 mm (4" x 0.75")	100/bag
SSI-1000	STEAMPlus™ Integrator	Type 5	101 mm x 19 mm (4" x 0.75")	1000/bag
SIL-250	8" Steam Indicator Strip	Type 4	203 mm x 16 mm (8" x 0.625")	250/box
SIL-250-L	8" Steam Indicator Strip Laminated	Type 4	203 mm x 16 mm (8" x 0.625")	250/box
SIS-250	4" Steam Indicator Strip	Type 4	101 mm x 19 mm (4" x 0.75")	250/box
DMS-250	DUAL™ Monitor Strip	Type 1	203 mm x 16 mm (8" x 0.625")	250/box
DMS-250-L	DUAL™ Monitor Strip Laminated	Type 1	203 mm x 16 mm (8" x 0.625")	250/box
SIP-001	Steam Indicator Pen			Each

### Indicator Tapes

Crosstex offers a wide selection of chemical indicator tapes which provide immediate identification of processed items while also securing sterilization packs. Color change indicator verifies exposure to sterilization process. Our indicator tape consists of a strong crepe-embossed paper with a pressure sensitive adhesive. The Indicator Tapes adhere to paper, paper/plastic, woven, treated woven and non-woven wraps. The adhesive allows for secure seals yet is easy to remove. Designed to aid in distinguishing processed from unprocessed loads.

- Tapes are individually packaged in 55 meter rolls (60 yards) and available in multiple widths
- Tape dispenser is also available and holds up to 2 rolls of 1" tape and has a weighted base
- ISO 11140-1 Type 1 Compliant



### Indicator Tapes

Crosstex Code	Width	Description	Color Transition	Quantity
ST-072	13 mm (1/2")	Indicator Tape	white to dark	36 rolls/cs
ST-048	19 mm (3/4")	Indicator Tape	white to dark	24 rolls/cs
ST-036	25 mm (1")	Indicator Tape	white to dark	18 rolls/cs
BT-048	19 mm (3/4")	Blue Indicator Tape	white to dark	24 rolls/cs
BT-036	25 mm (1")	Blue Indicator Tape	white to dark	18 rolls/cs
LF2-048	19 mm (3/4")	Indicator Tape – Latex / Lead Free	red to dark	24 rolls/cs
LF2-036	25 mm (1")	Indicator Tape – Latex / Lead Free	red to dark	18 rolls/cs
TD-001		Tape Dispenser		Each

## Chemical Indicators

### Bowie-Dick Test Packs

The Crosstex AirView™ and Lantor Cube® Bowie-Dick test packs evaluate the efficacy of air removal and steam penetration in pre-vacuum sterilizers. A Bowie-Dick Test Pass result indicates that the sterilizer successfully removed air and allowed steam to penetrate loads placed in the chamber. Crosstex Bowie-Dick Test Packs consist of a series of steam penetration barriers in the center of which is a chemical indicator sheet.

### Lantor Cube® Reusable Bowie-Dick Test Packs

- 25 test sheets per pack and can be utilized 25 times before disposal (Requires use of metal clamp – one time purchase.)
- Reduces waste and inventory space
- Saves money over single-use test packs
- Easy to interpret indicator sheet with blue to dark color transition
- Process at 134°C for 3.5 minutes
- Designed for simulating a 4 kg cotton pack according to ISO 11140-5 Type 2



### AirView™ II Single-Use Bowie-Dick Test Packs

- Easy to interpret indicator sheet with blue to dark color transition
- AirView™ II uses ink free of lead
- Instructions for Use (IFU) printed on back of each pack
- Smaller size (9.5 x 13 x 1.5 cm)
- Process at 134°C for 3.5 minutes
- Designed for simulating a 4 kg cotton pack according to ISO 11140-5 Type 2
- Individual test sheets (BDS-050) are available for preparing your own test pack.

### EU AirView™ Single-Use Bowie-Dick Test Packs

- Easy to interpret indicator sheet with blue to dark color transition
- EU AirView™ uses ink free of lead
- Instructions for Use (IFU) printed on back of each pack
- Smaller size (9.5 x 13 x 1.5 cm)
- Process at 134°C for 3.5 minutes
- Designed for simulating a 7 kg cotton pack according to ISO 11140-4 Type 2

### Bowie-Dick Test Packs

Crosstex Code	Description	Dimensions	Quantity
LCR-025	Lantor Cube® Reusable Bowie-Dick Test Pack		25/cs
LCP-001	Lantor Cube® Metal Clamp		Each
MBD030	AirView™ II Bowie-Dick Test Pack	9.5 x 13 x 1.5 cm	30/cs
BDS-050	Bowie-Dick Test Sheet	22 x 28 cm	50/pk
MBD030E	EU AirView™ Bowie-Dick Test Pack	9.5 x 13 x 1.5 cm	30/cs



## Sure-Check® Sterilization Pouches

CDC infection control guidelines make it clear - the only way to be sure an instrument has been sterilized is to expose it to all three sterilization criteria: time, temperature and steam. Type 4 Multi-variable indicators are designed to react to two or more of the critical variables and are intended to indicate exposure to a sterilization cycle at a stated value of the chosen variable. Yet traditional sterilization pouches have an internal and/or external process indicator that reacts only to temperature.

Sure-Check® Sterilization Pouches feature internal/external multi-variable indicator technology that confirms all three criteria for sterilization have been met.

For CDC compliance, today more than ever, you need to be sure about sterilization – you need Sure-Check®.

- Meets CDC Guidelines for Disinfection and Sterilization in Healthcare Facilities, 2008
- Tested and certified by an independent laboratory
- When used in conjunction with weekly biological monitoring, provides the highest level of sterility assurance, unlike traditional sterilization pouches with process indicators that measure only temperature
- Meets ANSI/AAMI ST79 Comprehensive Guide to Steam Sterilization and Assurance in Health Care Facilities
- Eliminates the extra step of adding separate multi-variable internal indicators to each pouch
- Type 4 Multi-variable Indicators



## Sure-Check® Sterilization Pouches

Crosstex Code	Size	Processes	Quantity
SCXX2	2.25" x 4" (6 x 10 cm)	Steam / EO	200/bx, 20/cs
SCX2	2.75" x 9" (7 x 23 cm)	Steam / EO	200/bx, 20/cs
SCXS2	3.5" x 5.25" (9 x 13 cm)	Steam / EO	200/bx, 10/cs
SCS2	3.5" x 9" (9 x 23 cm)	Steam / EO	200/bx, 20/cs
SCS25	3.5" x 9" (9 x 23 cm)	Steam / EO	500/bx, 10/cs
SCL3222	3.5" x 22" (9 x 56 cm)	Steam / EO	100/bx, 5/cs
SCW2	5.25" x 6.5" (13 x 17 cm)	Steam / EO	200/bx, 10/cs
SCM2	5.25" x 10" (13 x 25 cm)	Steam / EO	200/bx, 10/cs
SCL5152	5.25" x 15" (13 x 38 cm)	Steam / EO	200/bx, 10/cs
SCL2	7.5" x 13" (19 x 33 cm)	Steam / EO	200/bx, 5/cs
SCL8162	8" x 16" (20 x 41 cm)	Steam / EO	200/bx, 5/cs
SCL10152	10" x 15" (25 x 38 cm)	Steam / EO	100/bx, 5/cs
SCL10172	10.5" x 17" (27 x 43 cm)	Steam / EO	100/bx, 5/cs
SCL12152	12" x 15" (30 x 38 cm)	Steam / EO	100/bx, 5/cs
SCL12182	12" x 18" (30 x 46 cm)	Steam / EO	100/bx, 5/cs



## Packaging

### Duo-Check® Sterilization Pouches

Duo-Check® Sterilization Pouches with both internal and external indicators will maintain sterilization of instruments for up to three years. Compatible with Steam and EO sterilization agents only.

- Available in heat-seal and self-seal options
- Single-use pouches for sterilizing reusable instruments
- Manufactured with medical grade paper and extra-wide chevron seal to protect against instrument breaching
- Pink arrows will turn light brown when exposed to steam and dark brown when exposed to EO
- Meets ISO 11140 and 11607 standards for pouch performance
- Meets ANSI/AAMI ST79 Comprehensive Guide to Steam Sterilization and Assurance in Healthcare Facilities



### Duo-Check® Self-Seal Sterilization Pouches

Crosstex Code	Size	Processes	Quantity
SCZ	2" x 8" (5 x 20 cm)	Steam / EO	200/bx, 20/cs
SCXX	2.25" x 4" (6 x 10 cm)	Steam / EO	200/bx, 20/cs
SCX	2.75" x 9" (7 x 23 cm)	Steam / EO	200/bx, 20/cs
SCQ	3.25" x 9" (8 x 23 cm)	Steam / EO	200/bx, 20/cs
SCXS	3.5" x 5.25" (9 x 13 cm)	Steam / EO	200/bx, 10/cs
SCS	3.5" x 9" (9 x 23 cm)	Steam / EO	200/bx, 20/cs
SCS5	3.5" x 9" (9 x 23 cm)	Steam / EO	500/bx, 10/cs
SCL322	3.5" x 22" (9 x 56 cm)	Steam / EO	100/bx, 5/cs
SCB1X	4.25" x 11" (11 x 28 cm)	Steam / EO	200/bx, 10/cs
SCM	5.25" x 10" (13 x 25 cm)	Steam / EO	200/bx, 10/cs
SCL515	5.25" x 15" (13 x 38 cm)	Steam / EO	200/bx, 10/cs
SCL	7.5" x 13" (19 x 33 cm)	Steam / EO	200/bx, 5/cs
SCL816	8" x 16" (20 x 41 cm)	Steam / EO	200/bx, 5/cs
SCL1015	10" x 15" (25 x 38 cm)	Steam / EO	100/bx, 5/cs
SCL1215	12" x 15" (30 x 38 cm)	Steam / EO	100/bx, 5/cs
SCL1218	12" x 18" (30 x 46 cm)	Steam / EO	100/bx, 5/cs

### Duo-Check® Heat Seal Sterilization Pouches

Crosstex Code	Size	Processes	Quantity
SC310HS	3" x 10" (8 x 25 cm)	Steam / EO	200/bx, 10/cs
SC48HS	4" x 8" (10 x 20 cm)	Steam / EO	200/bx, 10/cs
SC411HS	4.75" x 11" (12 x 28 cm)	Steam / EO	200/bx, 10/cs
SC610HS	6" x 10" (15 x 25 cm)	Steam / EO	200/bx, 10/cs
SC622HS	6" x 22" (15 x 56 cm)	Steam / EO	200/bx, 5/cs
SC713HS	7.5" x 13" (19 x 33 cm)	Steam / EO	200/bx, 5/cs
SC1015HS	10" x 15" (25 x 38 cm)	Steam / EO	200/bx, 5/cs



### Steri-Coil™ Pouch Dividers

Crosstex Code	Dimensions	Quantity
SCD-001	3.5" x 3.5" x 20"	Each
SCD-012	2.5" x 6"	Each



### Sani-Roll® Sterilization Tubing (Paper/Plastic)

- Convenient, economical way to package instruments/items – use only the length and width required
- Manufactured from medical grade paper; complete paper and film separation
- Blue tinted transparent film easily identifies compromise in film due to puncturing or tearing
- Easily visible color process indicators for Steam and EO sterilization



### Sani-Roll® Sterilization Tubing

Crosstex Code	Dimensions	Processes	Quantity
SCT2	2" x 100 ft (5 cm x 30 m)	Steam / EO	16 rolls/cs
SCT3	3" x 100 ft (8 cm x 30 m)	Steam / EO	12 rolls/cs
SCT4	4" x 100 ft (10 cm x 30 m)	Steam / EO	12 rolls/cs
SCT6	6" x 100 ft (15 cm x 30 m)	Steam / EO	12 rolls/cs
SCT2200	2" x 656 ft (5 cm x 200 m)	Steam / EO	8 rolls/cs
SCT3200	3" x 656 ft (8 cm x 200 m)	Steam / EO	4 rolls/cs
SCT4200	4" x 656 ft (10 cm x 200 m)	Steam / EO	4 rolls/cs
SCT6200	6" x 656 ft (15 cm x 200 m)	Steam / EO	2 rolls/cs
SCT8200	8" x 656 ft (20 cm x 200 m)	Steam / EO	2 rolls/cs
SCT12200	12" x 656 ft (30 cm x 200 m)	Steam / EO	1 roll



### Heat Sealers

Compact and easy to operate, each heat sealer comes with instructions for use. Heat sealers are available in 18" (46 cm) and 24" (61 cm) sizes and are ready to use after a short warm up period.

- 1/2" (1.3 cm) seal in approximately two seconds
- If object exceeding 1/8" (3 mm) thickness is in the sealing area, the heat sealer will not operate, providing protection to employees
- Temperature setting can be changed to properly seal paper/poly and Tyvek® packaging products, as well as dust covers

### Heat Sealers

Crosstex Code	Size	Quantity
MHS-002	18"	Each
MHS-003	24"	Each

### CSR Sterilization Wraps

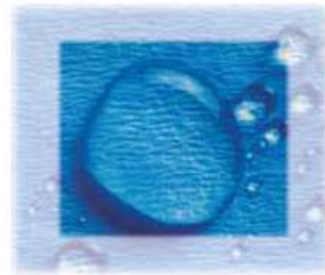
Manufactured from environmentally friendly cellulose material made from wood pulp, not petroleum – Eliminates skin sensitivity issues associated with oily residues inherent in plastic based wrappers.

- Highest BFE (bacterial filtration efficiency) Data Available / Highly Permeable (no wet packs) / Cost Effective
- Bacterial barrier to both airborne and waterborne contamination
- Outstanding liquid repellency - water, alcohol, iodine
- Exceptional tensile strength - wet or dry
- Use with EO and Steam sterilization processes
- Even texture to allow for immediate visual detection of small pinholes/tears
- Meets FFA (Flammable Fabrics Act) requirements



### CSR Sterilization Wraps

Crosstex Code	Dimensions	Processes	Quantity
SW12	12" x 12" (30 x 30 cm)	Steam / EO	100/bx, 10/cs
SW15	15" x 15" (38 x 38 cm)	Steam / EO	100/bx, 5/cs
SW18	18" x 18" (46 x 46 cm)	Steam / EO	100/bx, 5/cs
SW20	20" x 20" (51 x 51 cm)	Steam / EO	100/bx, 5/cs
SW24	24" x 24" (61 x 61 cm)	Steam / EO	100/bx, 5/cs
SW30	30" x 30" (76 x 76 cm)	Steam / EO	250/bx, 1/cs
SW36	36" x 36" (91 x 91 cm)	Steam / EO	250/bx, 1/cs
SW40	40" x 40" (102 x 102 cm)	Steam / EO	250/bx, 1/cs
SW48	48" x 48" (122 x 122 cm)	Steam / EO	100/bx, 1/cs
SW54	54" x 54" (137 x 137 cm)	Steam / EO	100/bx, 1/cs





# Trusted. Tailored. Precise.

We can help you  
ensure the safety  
of your product.



Monitoring Products for Gamma & E-Beam Sterilization

IRRAD



## Chemical Indicators

### Chemical Process Indicators

Crosstex Gamma & E-Beam Chemical Process Indicators (CPIs) are manufactured with Crosstex's Eco Friendly Indicating Inks and meet performance specifications as outlined in ISO 11140-1 Sterilization of health care products - Chemical indicators - Part 1: General requirements, for Type 1 Process Indicators. Our Chemical Process Indicators provide a fast and consistent visual check on materials that have been processed by Gamma or E-Beam sterilization processes.

- Consistent and irreversible color transition from yellow to red ( $\geq 10$  kGy dose) or green to dark ( $\geq 1$  kGy dose)
- Permanent pressure-sensitive adhesive
- 24 month shelf life
- Room temperature storage (15°C to 30°C)
- Each shipment is accompanied by a Certificate of Analysis to ensure product quality and consistency

### Chemical Process Indicators

24 month shelf life

	Crosstex Code	Description	Dose Level	Indicators Per Roll	Unexposed	Exposed
	CPI-R01	Circle Indicator Label 12.7 mm	$\geq 10$ kGy	5,000		
	CPI-R03	Circle Indicator Label 12.7 mm with imprinted text "RED IS EXPOSED"	$\geq 10$ kGy	5,000		
	SP-R58	Circle Indicator Label 12.7 mm with imprinted text "RED IS $\gamma$ EXPOSED"	$\geq 10$ kGy	5,000		
	CPI-F01	Circle Indicator Label 12.7 mm	$\geq 1$ kGy	5,000		
	CPI-R02	Indicator Labels for hand-held labeling systems 25 mm x 12 mm	$\geq 10$ kGy	1,000		
	CPI-R06	Indicator Labels for hand-held labeling systems with indicator 25 mm x 12 mm	$\geq 10$ kGy	1,000		
	SP-RXX	Custom Indicator Labels. Please Inquire	Custom	Varies		

Example of Label with Indicator

## Biological Indicators - Traditional Spore Strips

Crosstex offers Biological Indicators (BIs) for use in monitoring Gamma & E-Beam sterilization processes. Our biological indicators are manufactured using precise care, which provides assurance that each glassine pouch contains a biological indicator consistent in population, purity and resistance.

- Inoculated filter paper, each 7 mm x 38 mm, individually packaged in easy-to-handle glassine pouches
- The strips can be easily removed from the glassine pouch by tearing open for transfer to culture media or challenge device assembly
- Convenient shelf packages of 100 units per box
- Products are accompanied by a Certificate of Analysis and are certified with population, purity, and resistance characteristics
- Compliant with ISO 11138-1



### Traditional Spore Strips

*Bacillus pumilus* Cell Line 27142  
24 month shelf life

Crosstex Code	Population	Quantity
PM-106	10 <sup>8</sup>	100/box
PM-107	10 <sup>7</sup>	100/box
PM-108	10 <sup>6</sup>	100/box

## Spore Suspensions

Crosstex manufactures Spore Suspensions utilized in Gamma & E-Beam sterilization processes. The Spore Suspensions are pure suspensions of spores with known radiation resistance characteristics and a variety of population levels standardized per 0.1 mL. The Spore Suspensions allow for direct inoculation of products, typically to verify sterility of devices where a traditional biological indicator spore strip cannot be used.

- Each vial contains 10 mL of suspension. Diluent contains 20% ethanol
- Pharmaceutical grade glass vials with screw cap and septum
- Spore Suspensions require storage under refrigerated conditions (2°C to 8°C)
- Each vial of Spore Suspension is accompanied by a Certificate of Analysis detailing the source, assayed population, resistance characteristics on paper carrier and expiration date
- ISO 11138-1 Compliant



### Spore Suspensions

*Bacillus pumilus* Cell Line 27142  
24 month shelf life

Crosstex Code	Population per 0.1 mL
VBP-106	10 <sup>8</sup>
VBP-107	10 <sup>7</sup>
VBP-108	10 <sup>6</sup>



Innovative.  
Smart.  
Trusted.

We're your partner for  
sterilization products.



Monitoring Products for Vaporized Hydrogen Peroxide

VH202



## Biological Indicators

### SporView® Self-Contained Biological Indicators

Crosstex SporView® Self-Contained Biological Indicators (SCBIs) for monitoring Vaporized Hydrogen Peroxide (VH<sub>2</sub>O<sub>2</sub>) sterilization processes provide fast, visible, consistent and reliable results offering peace of mind for assurance of effective sterilization. Use of Crosstex's distinctively designed SCBI system reduces the possibility of contamination and minimizes the potential for false positives associated with post-exposure transfer. Crosstex SporView® SCBIs consist of a thermoplastic vial and a white cap, a crushable glass ampule with an exclusively formulated Trypticase® Soy Broth (TSB) modified with pH indicator, and a glass fiber disc inoculated with *Geobacillus stearothermophilus* spores.

- Reduced incubation time of 24 hours
- Visually distinct positive results from purple to yellow
- Chemical Indicator on label provides instant indication of exposure
- Smaller size, 8.4 mm x 45.5 mm, designed to fit in challenging sterilization areas
- Compliant with ISO 11138-1



### SporView® SCBIs

*Geobacillus stearothermophilus* Cell Line 7953  
18 month shelf life

Crosstex Code	Population	Incubation Time	Quantity
VH50	10 <sup>6</sup>	24 hours	50/box

### Digital Dry Block Incubator

The Crosstex Digital Dry Block Incubator is designed for convenient and reliable incubation of SporView® SCBIs.

- The electronically-heated aluminum block holds up to 10 units
- 13 mm well size
- Temperature and incubation time are displayed digitally
- Adjustable temperature (5°C to 70°C) and incubation time (0 to 99h 59m)
- Reaches set point temperature in 15 minutes or less
- Transparent lid included to ensure consistent temperature and to protect the units
- 12 month limited warranty

### Digital Dry Block Incubator

Crosstex Code	Voltage	Plug Type
INC-13A	110-220V	North & South America
INC-13E	110-220V	Europe
INC-13U	110-220V	United Kingdom
INC-13AC	110-220V	Australia & China



### Standard Dry Block Incubators

The Crosstex Standard Dry Block Incubators are available with 11 mm well sizes designed for use with SporView® SCBIs.

- Compact design allows for minimal counter space to be utilized
- Aluminum block holds up to 15 units
- Built-in vial crusher
- 5 year limited warranty



### Standard Dry Block Incubators

Crosstex Code	Temperature	Voltage	Plug Type
NDB-060	55°C to 60°C	110V	North & South America
NDB-060-E	55°C to 60°C	220V	Europe
NDB-060-A	55°C to 60°C	220V	Australia & China

## Biological Indicators

### Inoculated Carriers & Biological Indicators

Crosstex manufactures a comprehensive product line of Inoculated Carriers and Biological Indicators (BIs) for use in monitoring Vaporized Hydrogen Peroxide (VH<sub>2</sub>O<sub>2</sub>) sterilization and high level disinfection processes. The BIs are designed for monitoring processes whether placed directly into the chamber for sterilization or positioned in areas of a room which are the most difficult to disinfect.

- Convenient shelf packages of 100 units per box
- *Bacillus atrophæus* and *Geobacillus stearothermophilus* product configurations available
- Products are accompanied by a Certificate of Analysis and are certified with population, purity, and resistance characteristics (D value)



### Steel & Glass Fiber Spore Discs

- Glass Fiber Spore Discs are 9 mm in diameter and are packaged in Tyvek®/Mylar®
- Steel Spore Discs are 6 mm in diameter and are available packaged in easy-to-access Tyvek®/Mylar® or Tyvek®/Tyvek® pouches (Please inquire for bulk & other packaging)

### Spore Wires

- 40 mm x 1.5 mm and packaged in bulk
- Rigid structure which allows for easy insertion and removal from a device

### Glass Fiber Spore Discs

*Bacillus atrophæus* Cell Line 9372  
12 month shelf life

Crosstex Code	Packaging	Population	Quantity
GFTN-06	Tyvek®/Mylar®	10 <sup>8</sup>	100/box

*Geobacillus stearothermophilus* Cell Line 7953  
24 month shelf life

Crosstex Code	Packaging	Population	Quantity
GFTS-06	Tyvek®/Mylar®	10 <sup>8</sup>	100/box

### Steel Spore Discs (Sterilization)

*Bacillus atrophæus* Cell Line 9372  
12 month shelf life

Crosstex Code	Packaging	Population	Quantity
SDN-06	Tyvek®/Mylar®	10 <sup>8</sup>	100/box

*Geobacillus stearothermophilus* Cell Line 7953  
19 month shelf life

Crosstex Code	Packaging	Population	Quantity
SDS-06	Tyvek®/Mylar®	10 <sup>8</sup>	100/box

### Steel Spore Discs (Disinfection)

*Bacillus atrophæus* Cell Line 9372  
12 month shelf life

Crosstex Code	Packaging	Population	Quantity
TTN-06	Tyvek®/Tyvek®	10 <sup>8</sup>	100/box

*Geobacillus stearothermophilus* Cell Line 7953  
19 month shelf life

Crosstex Code	Packaging	Population	Quantity
TTS-06	Tyvek®/Tyvek®	10 <sup>8</sup>	100/box

### Spore Wires

*Geobacillus stearothermophilus* Cell Line 7953  
19 month shelf life

Crosstex Code	Description	Packaging	Population	Quantity
SWH-06	Braided Steel	Bulk	10 <sup>8</sup>	100/box



## Biological Indicators

### Spore Suspensions

Crosstex manufactures Spore Suspensions utilized in  $VH_2O_2$  sterilization processes. The Spore Suspensions are pure suspensions of spores with known resistance characteristics and a variety of population levels standardized per 0.1 mL. The Spore Suspensions allow for direct inoculation of products, typically to verify sterility of devices which are most difficult to sterilize. They can also be used for a variety of other microbiological tests including cleaning effectiveness studies, Bioburden percent recovery and Bacteriostasis/Fungistasis (BF) testing.

- Each vial contains 10 mL of suspension. Diluent contains 20% ethanol
- Pharmaceutical grade glass vials with screw cap and septum
- Spore Suspensions require storage under refrigerated conditions (2°C to 8°C)
- Each vial of Spore Suspension is accompanied by a Certificate of Analysis detailing the source, assayed population, resistance characteristics and expiration date
- ISO 11138-1 Compliant



### Spore Suspensions

*Geobacillus stearothermophilus* Cell Line 7953  
24 month shelf life

Crosstex Code	Population per 0.1 mL
VGS-106H	$10^6$
VGS-107H	$10^7$
VGS-108H	$10^8$

### Prepared Culture Media

Crosstex Prepared Culture Media consists of an exclusively formulated Trypticase® Soy Broth (TSB) modified with pH indicator. Prepared Culture Media for use with both *Geobacillus stearothermophilus* (GMBCP-100) and *Bacillus atrophaeus* (GMBTB-100) are available. A reduced incubation time for  $VH_2O_2$  processes has been validated when Crosstex Biological Indicators are used in conjunction with Crosstex's Prepared Culture Media.

- Reduced incubation time of 24 hours when used with *Geobacillus stearothermophilus* (GMBCP-100) and 48 hours when used with *Bacillus atrophaeus* (GMBTB-100)
- Visually distinct results:
  - Purple media transitions to yellow when positive for *Geobacillus stearothermophilus* growth
  - Blue/Green media transitions to yellow when positive for *Bacillus atrophaeus* growth
- 13 mm x 100 mm flat bottom tubes of Type I borosilicate glass with screw caps
- Each lot is accompanied by a Certificate of Analysis and is certified with growth promotion capabilities using *Geobacillus stearothermophilus* Cell Line 7953 or *Bacillus atrophaeus* Cell Line 9372

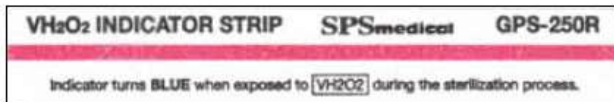
### Prepared Culture Media

12 month shelf life

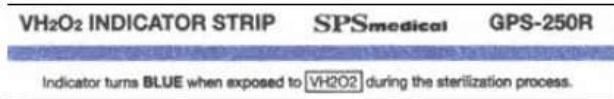
Crosstex Code	Volume	Quantity
GMBCP-100	5 mL	100 tubes/box
GMBTB-100	5 mL	100 tubes/box



## Chemical Indicators



Unexposed



Exposed

### Chemical Indicator Strips

24 month shelf life

Crosstex Code	Description	Dimensions	Quantity
GPS-250R	$VH_2O_2$ CI Strip –Type 4	101 mm x 15 mm (4" x 0.75")	250/box

### Chemical Indicator Strips

Crosstex  $VH_2O_2$  Chemical Indicator Strips are certified to meet chemical indicator specifications for pack monitoring when used in  $VH_2O_2$  sterilization processes. Crosstex evaluates the performance of every lot in state of the art equipment to ensure consistent and reliable performance.

- Provide a distinct color change from red to blue upon exposure to  $VH_2O_2$  processes
- Demonstrate exceptional performance in the most widely used  $VH_2O_2$  sterilizers
- Manufactured with synthetic material
- ISO 11140-1 Type 4 Compliant



## Chemical Indicators







### Chemical Process Indicators

Crosstex Vaporized Hydrogen Peroxide (VH<sub>2</sub>O<sub>2</sub>) Chemical Process Indicators (CPIs) meet performance specifications as outlined in ISO 11140-1 Sterilization of health care products - Chemical indicators - Part 1: General requirements, for Type 1 Process Indicators. CPIs provide a fast and reliable visual check on items that were exposed to VH<sub>2</sub>O<sub>2</sub>.

- Consistent color transition
- No light sensitivity issues
- Permanent pressure-sensitive adhesive
- Room temperature storage (15°C to 30°C)
- Each shipment is accompanied by a Certificate of Analysis to ensure product quality and consistency

### Chemical Process Indicators

24 month shelf life

	Crosstex Code	Description	Indicators Per Roll	Unexposed	Exposed
	CPI-P03	Circle Indicator Label 12.7 mm with imprinted text "BLUE IS H <sub>2</sub> O <sub>2</sub> EXPOSED"	5,000		
	GPL-2000R	Circle Indicator Label 9 mm	2,000		

### Indicator Tape (Red to Yellow)

Crosstex VH<sub>2</sub>O<sub>2</sub> Tape (red to yellow option) is designed to aid in distinguishing processed from unprocessed loads. The tape consists of a strong custom-made white polyester substrate with a pressure sensitive adhesive which adheres to Tyvek®, plastic, woven, treated woven and non-woven wraps. The adhesive allows for secure seals yet is easy to remove.

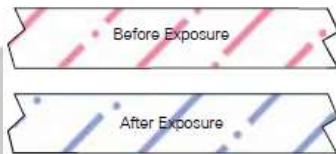
- Latex & Lead free
- Tape will change color from red to yellow when exposed to 2.3 mg/L ± 0.4 mg/L of VH<sub>2</sub>O<sub>2</sub> at 50°C for 6 minutes exposure time or longer
- Can be written upon
- Long shelf life of 36 months
- Each shipment includes a Certificate of Analysis for assurance of product quality and performance
- ISO 11140-1 Type 1 Compliant



### Indicator Tape (Red to Blue)

Crosstex VH<sub>2</sub>O<sub>2</sub> Tape (red to blue option) is to be used as an external chemical indicator for packages to be sterilized in VH<sub>2</sub>O<sub>2</sub> sterilization processes. This is a process indicator that indicates the package has been exposed to VH<sub>2</sub>O<sub>2</sub> during the sterilization process.

- Each roll comes in its own dispenser box; just tear off appropriate length, remove liner and secure to wrap
- Tape will change color from red to blue when exposed to 2.3 mg/L ± 0.4 mg/L of VH<sub>2</sub>O<sub>2</sub> at 50°C for 6 minutes exposure time or longer
- 15 month shelf life
- ISO 11140-1 Type 1 Compliant



### Indicator Tapes

Crosstex Code	Description	Dimensions	Quantity
TAP-H48	VH <sub>2</sub> O <sub>2</sub> Tape (red to yellow)	19 mm x 55 m (3/4" x 60 yds)	48 rolls/box
HT-048	VH <sub>2</sub> O <sub>2</sub> Tape (red to blue)	19 mm x 55 m (3/4" x 60 yds)	24 rolls/box

## Tyvek® Sterilization Pouches

Crosstex Tyvek® Sterilization Pouches include a chemical indicator for verification of exposure and will maintain sterilization of instruments for up to 24 months.

- Single-use pouches for sterilizing reusable instruments
- Self-seal and heat-seal styles, as well as a range of sizes to accommodate most instruments
- Manufactured with Tyvek® material for superior tear strength and puncture resistance
- Pouches and rolls feature a convenient built-in green indicator that will turn yellow when exposed
- Meet ISO 11607 standards for pouch performance



## Tyvek® Self Seal & Heat Seal Sterilization Pouches

Crosstex Code	Description	Size	Process	Quantity
TSP-180	Self-Seal Tyvek® Pouch	3.5" x 5.25" (9 x 13 cm)	VH <sub>2</sub> O <sub>2</sub>	200/bx, 10/cs
TSP-181	Self-Seal Tyvek® Pouch	3.5" x 9" (9 x 23 cm)	VH <sub>2</sub> O <sub>2</sub>	200/bx, 10/cs
TSP-182	Self-Seal Tyvek® Pouch	4" x 24" (10 x 61 cm)	VH <sub>2</sub> O <sub>2</sub>	200/bx, 4/cs
TSP-183	Self-Seal Tyvek® Pouch	5.25" x 10" (13 x 25 cm)	VH <sub>2</sub> O <sub>2</sub>	200/bx, 10/cs
TSP-184	Self-Seal Tyvek® Pouch	5" x 15" (13 x 38 cm)	VH <sub>2</sub> O <sub>2</sub>	200/bx, 10/cs
TSP-185	Self-Seal Tyvek® Pouch	7.5" x 13" (19 x 33 cm)	VH <sub>2</sub> O <sub>2</sub>	200/bx, 5/cs
THP-282	Heat-Seal Tyvek® Pouch	4" x 9" (10 x 23 cm)	VH <sub>2</sub> O <sub>2</sub>	200/bx, 10/cs
THP-283	Heat-Seal Tyvek® Pouch	6" x 12" (15 x 30 cm)	VH <sub>2</sub> O <sub>2</sub>	200/bx, 10/cs



## Steri-Coil™ Pouch Dividers

Crosstex Code	Dimensions	Quantity
SCD-001	3.5" x 3.5" x 20"	Each
SCD-012	2.5" x 6"	Each



## Tyvek® Roll Stock Tubing

Manufactured to the same performance standards as our pouches, Crosstex Tyvek® tubing is designed to be cut to any length prior to packaging and then mechanically sealed or taped closed.

- Manufactured with Tyvek® material
- Comes in roll form for custom sizing
- Ideal for long or odd shaped instruments
- Individually packaged in 100 foot (30 meter) rolls



## Tyvek® Roll Stock Tubing

Crosstex Code	Size	Process	Quantity
TST-004	4" x 100 ft (10 cm x 30 m)	VH <sub>2</sub> O <sub>2</sub>	10 rolls/cs
TST-006	6" x 100 ft (15 cm x 30 m)	VH <sub>2</sub> O <sub>2</sub>	10 rolls/cs

## Heat Sealers

Compact and easy to operate, each heat sealer comes with instructions for use. Heat sealers are available in 18" (46 cm) and 24" (61 cm) sizes and are ready to use after a short warm up period.

- 1/2" (1.3 cm) seal in approximately two seconds
- If object exceeding 1/8" (3 mm) thickness is in the sealing area, the heat sealer will not operate, providing protection to employees
- Temperature setting can be changed to properly seal paper/poly and Tyvek® packaging products, as well as dust covers



## Heat Sealers

Crosstex Code	Size	Quantity
MHS-002	18"	Each
MHS-003	24"	Each



Timely.  
Accurate.  
Experienced.

We're with you  
from start to finish.



Monitoring Products for Ethylene Oxide

EO



## Biological Indicators

### Self-Contained Biological Indicators

Crosstex Self-Contained Biological Indicators (SCBIs) for monitoring Ethylene Oxide (EO) sterilization processes provide fast, visible, consistent and reliable results offering peace of mind for assurance of effective EO sterilization processing. Use of Crosstex's SCBIs reduces the possibility of contamination and minimizes the potential for false positives associated with post-exposure transfer.

- Reduced incubation time of 48 hours
- Visually distinct positive results from green to yellow
- Chemical Indicator on label provides instant indication of exposure
- Saves time by eliminating aseptic culturing required with traditional spore strips
- Unique packaging insert keeps SCBIs in upright position and allows for quick reference to the number of units remaining in the package
- Compliant with ISO 11138-1 and 11138-2

### Traditional SCBIs

Consist of a durable polycarbonate vial with cap, a crushable glass ampule with an exclusively formulated Trypticase® Soy Broth (TSB) modified with pH indicator, and a disc inoculated with *Bacillus atrophæus* spores.



- Heavy duty construction allows for exposures under extreme conditions without concern of causing damage to the SCBI
- Activate for incubation by pressing the smart push cap system completely to crush the ampule
- Larger size, 13 mm x 61 mm, fits directly into sterilizer racks/baskets

### SporView® SCBIs

Consist of a thermoplastic vial and a green cap, a crushable glass ampule with an exclusively formulated Trypticase® Soy Broth (TSB) modified with pH indicator, and a disc inoculated with *Bacillus atrophæus* spores.



- The SporView® SCBIs are easily activated by squeezing the sides of the vial manually or with a convenient crushing tool
- Smaller size, 8.4 mm x 45.5 mm, designed to fit in challenging sterilization areas

### Traditional SCBIs

*Bacillus atrophæus* Cell Line 9372  
24 month shelf life

Crosstex Code	Population	Incubation Time	Quantity
SCE-06	10 <sup>6</sup>	48 hours	50/box

### SporView® SCBIs

*Bacillus atrophæus* Cell Line 9372  
24 month shelf life

Crosstex Code	Population	Incubation Time	Quantity
SCA-100	10 <sup>6</sup>	48 hours	100/box

### Digital Dry Block Incubators

The Crosstex Digital Dry Block Incubator is designed for convenient and reliable incubation of both SporView® and Traditional SCBIs.

- The electronically-heated aluminum block holds up to 10 units
- 13 mm well size
- Temperature and incubation time are displayed digitally
- Adjustable temperature (5°C to 70°C) and incubation time (0 to 99h 59m)
- Reaches set point temperature in 15 minutes or less
- Transparent lid included to ensure consistent temperature and to protect the units
- 12 month limited warranty



### Digital Dry Block Incubators

Crosstex Code	Voltage	Plug Type
INC-13A	110-220V	North & South America
INC-13E	110-220V	Europe
INC-13U	110-220V	United Kingdom
INC-13AC	110-220V	Australia & China



## Biological Indicators

### Standard Dry Block Incubators

The Crosstex Standard Dry Block Incubator is available with both 11 mm and 13 mm well sizes. The 11 mm well size option (NDB-037) is designed for use with SporView® SCBIs. The 13 mm well size option (NDB-036) is designed for use with our Traditional SCBIs and Prepared Culture Media tubes.

- Compact design allows for minimal counter space to be utilized
- Aluminum block holds up to 15 units
- The 11 mm well size option (NDB-037) comes with a built-in vial crusher
- 5 year limited warranty



### Standard Dry Block Incubators

Crosstex Code	Temperature	Well Size	Voltage	Plug Type
NDB-037	37°C	11 mm	110V	North & South America
NDB-037-E	37°C	11 mm	220V	Europe
NDB-036	37°C	13 mm	110V	North & South America
NDB-036-A	37°C	13 mm	220V	Australia & China

### Inoculated Carriers & Biological Indicators

Crosstex manufactures a full line of Inoculated Carriers and Biological Indicators (BIs) for use in monitoring Ethylene Oxide (EO) sterilization processes. Our most popular inoculated carriers and biological indicators are manufactured using state of the art equipment, which provides assurance that each glassine pouch contains a biological indicator consistent in population, purity and dimension.

- Convenient shelf packages of 100 units per box
- Products are accompanied by a Certificate of Analysis and are certified with population, purity, and resistance characteristics (*D* value, survival and kill where applicable)
- Compliant with ISO 11138-1 and 11138-2

### Traditional Spore Strips

Consist of inoculated filter paper, each 7 mm x 38 mm, individually packaged in easy-to-handle glassine pouches.

- The strips can be easily removed from the glassine pouch by tearing or peeling the pouch open for transfer to culture media or challenge device assembly



### Traditional Spore Strips

*Bacillus atrophaeus* Cell Line 9372  
24 month shelf life

Crosstex Code	Population	Quantity
BG-104	10 <sup>4</sup>	100/box
BG-105	10 <sup>5</sup>	100/box
BG-106	10 <sup>6</sup>	100/box

### Mini Spore Strips

Consist of inoculated filter paper, each 2 mm x 10 mm, packaged in a variety of options. The small size of the Mini Spore Strips allows them to fit into areas of a device where standard sized spore strips cannot be used, such as within a syringe barrel, inside tubing or under a cap.

- Crosstex Mini Spore Strips are available packaged in glassine envelopes of two sizes: a larger envelope 25 mm x 50 mm (STN-062) or a mini glassine envelope 25 mm x 25 mm (STN-062MG)
- The product is also available as an inoculated carrier in bulk (no glassine packaging - STN-062B)



### Mini Spore Strips

*Bacillus atrophaeus* Cell Line 9372  
30 month shelf life

Crosstex Code	Packaging	Population	Quantity
STN-062	Glassine envelopes	10 <sup>8</sup>	100/box
STN-062B	Bulk	10 <sup>6</sup>	100/box
STN-062MG	Mini glassine envelopes	10 <sup>8</sup>	100/box

## Biological Indicators

### Spore Discs

Crosstex Spore Discs are available in two sizes, 6 mm and 3 mm diameters. The discs are designed to be utilized as inoculated carriers for placement directly into areas of a device which are the most difficult to sterilize.

- The Inoculated Carriers are packaged in easy-to-access and handle bulk packaging
- Crosstex Spore Discs will fit into small areas of a device where a standard-sized spore strip cannot be used, such as within a syringe barrel, inside tubing and vials or under a cap



6 mm

3 mm



6 mm

3 mm

### Spore Discs

*Bacillus atrophæus* Cell Line 9372

24 month shelf life (BG-106D) / 30 month shelf life (DN18-06)

Crosstex Code	Disc Diameter	Packaging	Population	Quantity
BG-106D	6 mm	Bulk	10 <sup>6</sup>	100/box
DN18-06	3 mm	Bulk	10 <sup>6</sup>	100/box

### Spore Threads & Spore Wires

- Ideal for use in tubing, lumens and other devices/ instruments where larger BIs and carriers cannot be utilized
- Crosstex's manufacturing process is designed to ensure that the entire length of the threads and wires contains a consistent number of spores
- Spore Wires have a rigid structure which allows for easy insertion and removal from a device
- The steel construction of our Spore Wires does not absorb moisture which is ideal when there is condensation within the lumen



### Spore Threads & Spore Wires

*Bacillus atrophæus* Cell Line 9372

24 month shelf life (Threads) / 12 month shelf life (Wires)

Crosstex Code	Description	Packaging	Population	Quantity
THN-06	Cotton Thread 25 mm x 0.1 mm	Bulk	10 <sup>6</sup>	100/box
THN-06P	Cotton Thread 25 mm x 0.1 mm	Glassine	10 <sup>6</sup>	100/box
SWN-06	Braided Steel 40 mm x 1.5 mm	Bulk	10 <sup>6</sup>	100/box

### Prepared Culture Media

Crosstex Prepared Culture Media consists of an exclusively formulated Trypticase<sup>®</sup> Soy Broth (TSB) modified with pH indicator. A reduced incubation time of 72 hours for EO sterilization has been validated when Crosstex Biological Indicators are used in conjunction with Crosstex's Prepared Culture Media.

- Visually distinct results from green to yellow in a minimum of 72 hours
- 13 mm x 100 mm flat bottom tubes of Type I borosilicate glass with screw caps
- Each lot is accompanied by a Certificate of Analysis and is certified with growth promotion capabilities using *Bacillus atrophæus* Cell Line 9372

### Prepared Culture Media

12 month shelf life

Crosstex Code	Volume	Quantity
GMBTB-100	5 mL	100 tubes/box





## Biological Indicators

### Spore Suspensions

Crosstex manufactures a wide range of Spore Suspensions utilized in Ethylene Oxide (EO) sterilization processes. The Spore Suspensions are pure suspensions of spores with known resistance characteristics and a variety of population levels standardized per 0.1 mL. The Spore Suspensions allow for direct inoculation of products, typically to verify sterility of devices where a traditional biological indicator spore strip cannot be used. They can also be used for a variety of other microbiological tests including cleaning effectiveness studies, Bioburden percent recovery and Bacteriostasis/Fungistasis (BF) testing.

- Each vial contains 10 mL of suspension. Diluent contains 20% ethanol
- Pharmaceutical grade glass vials with screw cap and septum
- Spore Suspensions require storage under refrigerated conditions (2°C to 8°C)
- Each vial of Spore Suspension is accompanied by a Certificate of Analysis detailing the source, assayed population, resistance characteristics on paper carrier and expiration date
- ISO 11138-1 Compliant



### Spore Suspensions

*Bacillus atrophaeus* Cell Line 9372  
24 month shelf life

Crosstex Code	Population per 0.1 mL
VBA-102	10 <sup>2</sup>
VBA-103	10 <sup>3</sup>
VBA-104	10 <sup>4</sup>
VBA-105	10 <sup>5</sup>
VBA-106	10 <sup>6</sup>
VBA-107	10 <sup>7</sup>
VBA-108	10 <sup>8</sup>
VBA-109	10 <sup>9</sup>

## Chemical Indicators

### Chemical Indicator Strips

Crosstex manufactures a wide range of chemical indicators for use in Ethylene Oxide (EO) sterilization. The indicator strips provide distinct color change when exposed in EO cycles. Our eight inch strips can be used for larger packs or torn in half at perforation for smaller packs.

- Designed for Type 1 or Type 4 exposures at 54°C for 20 minutes at 60% Relative Humidity (RH) using 600 mg/L gas concentration
- Can be utilized in 100% EO and EO/HCFC gas mixture
- Room temperature storage (15°C to 30°C)
- Each shipment includes a Certificate of Analysis for assurance of product quality and performance

### DUAL™ Monitor Strips

- Irreversible color transition from cream to orange in EO and cream to dark brown in Steam
- Designed to be used for both Steam and EO, thereby reducing inventory, is error-free and saves money over single process indicators
- Laminated option available (DMS-250-L)
- ISO 11140-1 Type 1 Compliant

#### Unexposed (EO)



#### Exposed (EO)



### EO Gas Indicator Strips – Type 1

- Irreversible color transition from cream to rust (orange)
- ISO 11140-1 Type 1 Compliant

#### Unexposed



#### Exposed



## Chemical Indicators

### EO Gas Sterilization Monitor Strips - Type 1

- Irreversible color transition from cream to orange
- ISO 11140-1 Type 1 Compliant



### EO Gas Indicator Strips – Type 4

- Irreversible color transition from blue to brown/gold
- ISO 11140-1 Type 4 Compliant



## Chemical Indicator Strips

Crosstex Code	Description	Type	Dimensions	Quantity
DMS-250	DUAL™ Monitor Strip	Type 1	203 mm x 16 mm (8" x 0.625")	250/box
DMS-250-L	DUAL™ Monitor Strip, Laminated	Type 1	203 mm x 16 mm (8" x 0.625")	250/box
GIS-250	EO Gas Indicator Strip	Type 1	101 mm x 19 mm (4" x 0.75")	250/box
GSM-100	EO Gas Sterilization Monitor Strip	Type 1	60 mm x 19 mm (2.75" x 0.75")	100/bag
GIL-250	EO Gas Indicator Strip	Type 4	203 mm x 16 mm (8" x 0.625")	250/box

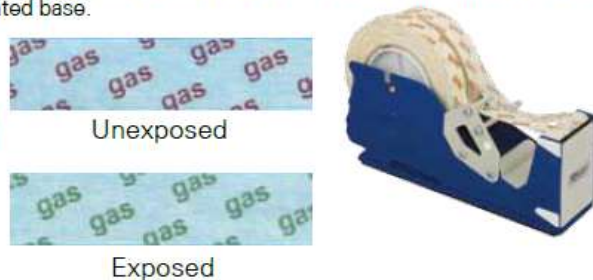
## Indicator Tapes

Indicator tapes provide immediate identification of processed items while also securing sterilization packs. Color change indicator verifies exposure to sterilization process. Tapes are individually packaged in 60 yard rolls and available in multiple widths. Tape dispenser can hold up to 2 rolls of 1" tape and has a weighted base.

- Irreversible color transition from red to green
- Can be written upon
- ISO 11140-1 Type 1 Compliant

### Indicator Tapes

Crosstex Code	Description	Quantity
GT-036	1" EO Gas Indicator Tape	18 rolls/cs
GT-048	3/4" EO Gas Indicator Tape	24 rolls/cs
TD-001	Tape Dispenser	Each



Colors shown are representations of printed ink initial and signal colors but may vary from actual use.



## Chemical Indicators

### Chemical Process Indicators

Crosstex Ethylene Oxide (EO) Chemical Process Indicators (CPIs) are manufactured with Crosstex's Indicating Inks and meet performance specifications as outlined in ISO 11140-1 Sterilization of health care products - Chemical indicators - Part 1: General requirements, for Type 1 Process Indicators. Our Chemical Process Indicators provide a fast and consistent visual check on items that were sterilized by EO.

- Consistent and irreversible color transition
- Permanent pressure-sensitive adhesive
- Room temperature storage (15°C to 30°C)
- Each shipment is accompanied by a Certificate of Analysis to ensure product quality and consistency

### Chemical Process Indicators

24 month shelf life

Crosstex Code	Description	Indicators per Roll	Unexposed	Exposed
 CPI-E01	Circle Indicator Label 12.7 mm	5,000		
 CPI-E02	Indicator Labels for hand-held labeling systems 25 mm x 12 mm	1,500		
 CPI-E03	Circle Indicator Label 12.7 mm with imprinted text "GREEN IS EO EXPOSED"	5,000		
 SP-E16	Indicator Label for hand-held labeling systems with imprinted text "GREEN IS EO EXPOSED" 25 mm x 12 mm	1,500		

36 month shelf life

Crosstex Code	Description	Indicators per Roll	Unexposed	Exposed
 SGL-1000	DUAL™ Circle Indicator Label 19 mm	1,000		



## Sure-Check® Sterilization Pouches

Sure-Check® Sterilization Pouches with both internal and external chemical indicators are compatible with both Steam and EO sterilization processes. The pouches are manufactured with high quality materials and a cutting edge manufacturing process which assures a consistently clean separation (peeling) of the film from the paper, maintaining the sterile integrity of the contents.

- Consistent and irreversible color transition
- Single-use pouches for sterilizing reusable instruments
- Wet strength treated, virgin medical grade paper that meets medical pouch standards



## Sure-Check® Sterilization Pouches

Crosstex Code	Size	Processes	Quantity
SCXX2	2.25" x 4" (6 x 10 cm)	Steam / EO	200/bx, 20/cs
SCX2	2.75" x 9" (7 x 23 cm)	Steam / EO	200/bx, 20/cs
SCXS2	3.5" x 5.25" (9 x 13 cm)	Steam / EO	200/bx, 10/cs
SCS2	3.5" x 9" (9 x 23 cm)	Steam / EO	200/bx, 20/cs
SCS25	3.5" x 9" (9 x 23 cm)	Steam / EO	500/bx, 10/cs
SCL3222	3.5" x 22" (9 x 56 cm)	Steam / EO	100/bx, 5/cs
SCW2	5.25" x 6.5" (13 x 17 cm)	Steam / EO	200/bx, 10/cs
SCM2	5.25" x 10" (13 x 25 cm)	Steam / EO	200/bx, 10/cs
SCL5152	5.25" x 15" (13 x 38 cm)	Steam / EO	200/bx, 10/cs
SCL2	7.5" x 13" (19 x 33 cm)	Steam / EO	200/bx, 5/cs
SCL8162	8" x 16" (20 x 41 cm)	Steam / EO	200/bx, 5/cs
SCL10152	10" x 15" (25 x 38 cm)	Steam / EO	100/bx, 5/cs
SCL10172	10.5" x 17" (27 x 43 cm)	Steam / EO	100/bx, 5/cs
SCL12152	12" x 15" (30 x 38 cm)	Steam / EO	100/bx, 5/cs
SCL12182	12" x 18" (30 x 46 cm)	Steam / EO	100/bx, 5/cs



## Steri-Coil™ Pouch Dividers

Crosstex Code	Dimensions	Quantity
SCD-001	3.5" x 3.5" x 20"	Each
SCD-012	2.5" x 6"	Each



## Packaging

### Duo-Check® Sterilization Pouches

Duo-Check® Sterilization Pouches with both internal and external indicators will maintain sterilization of instruments for up to three years. Compatible with Steam and EO sterilization agents only.

- Available in heat-seal and self-seal options
- Single-use pouches for sterilizing reusable instruments
- Manufactured with medical grade paper and extra-wide chevron seal to protect against instrument breaching
- Pink arrows will turn light brown when exposed to steam and dark brown when exposed to EO
- Meets ISO 11140 and 11607 standards for pouch performance



### Duo-Check® Self-Seal Sterilization Pouches

Crosstex Code	Size	Processes	Quantity
SCZ	2" x 8" (5 x 20 cm)	Steam / EO	200/bx, 20/cs
SCXX	2.25" x 4" (6 x 10 cm)	Steam / EO	200/bx, 20/cs
SCX	2.75" x 9" (7 x 23 cm)	Steam / EO	200/bx, 20/cs
SCQ	3.25" x 9" (8 x 23 cm)	Steam / EO	200/bx, 20/cs
SCXS	3.5" x 5.25" (9 x 13 cm)	Steam / EO	200/bx, 10/cs
SCS	3.5" x 9" (9 x 23 cm)	Steam / EO	200/bx, 20/cs
SCS5	3.5" x 9" (9 x 23 cm)	Steam / EO	500/bx, 10/cs
SCL322	3.5" x 22" (9 x 56 cm)	Steam / EO	100/bx, 5/cs
SCB1X	4.25" x 11" (11 x 28 cm)	Steam / EO	200/bx, 10/cs
SCM	5.25" x 10" (13 x 25 cm)	Steam / EO	200/bx, 10/cs
SCL515	5.25" x 15" (13 x 38 cm)	Steam / EO	200/bx, 10/cs
SCL	7.5" x 13" (19 x 33 cm)	Steam / EO	200/bx, 5/cs
SCL816	8" x 16" (20 x 41 cm)	Steam / EO	200/bx, 5/cs
SCL1015	10" x 15" (25 x 38 cm)	Steam / EO	100/bx, 5/cs
SCL1215	12" x 15" (30 x 38 cm)	Steam / EO	100/bx, 5/cs
SCL1218	12" x 18" (30 x 46 cm)	Steam / EO	100/bx, 5/cs

### Duo-Check® Heat-Seal Sterilization Pouches

Crosstex Code	Size	Processes	Quantity
SC310HS	3" x 10" (8 x 25 cm)	Steam / EO	200/bx, 10/cs
SC48HS	4" x 8" (10 x 20 cm)	Steam / EO	200/bx, 10/cs
SC411HS	4.75" x 11" (12 x 28 cm)	Steam / EO	200/bx, 10/cs
SC610HS	6" x 10" (15 x 25 cm)	Steam / EO	200/bx, 10/cs
SC622HS	6" x 22" (15 x 56 cm)	Steam / EO	200/bx, 5/cs
SC713HS	7.5" x 13" (19 x 33 cm)	Steam / EO	200/bx, 5/cs
SC1015HS	10" x 15" (25 x 38 cm)	Steam / EO	200/bx, 5/cs

### Sani-Roll® Sterilization Tubing (Paper/Plastic)

- Convenient, economical way to package instruments/items – use only the length and width required
- Manufactured from medical grade paper; complete paper and film separation
- Blue tinted transparent film easily identifies compromise in film due to puncturing or tearing
- Easily visible color process indicators for Steam and EO sterilization



### Sani-Roll® Sterilization Tubing

Crosstex Code	Dimensions	Processes	Quantity
SCT2	2" x 100 ft (5 cm x 30 m)	Steam / EO	16 rolls/cs
SCT3	3" x 100 ft (8 cm x 30 m)	Steam / EO	12 rolls/cs
SCT4	4" x 100 ft (10 cm x 30 m)	Steam / EO	12 rolls/cs
SCT6	6" x 100 ft (15 cm x 30 m)	Steam / EO	12 rolls/cs
SCT2200	2" x 656 ft (5 cm x 200 m)	Steam / EO	8 rolls/cs
SCT3200	3" x 656 ft (8 cm x 200 m)	Steam / EO	4 rolls/cs
SCT4200	4" x 656 ft (10 cm x 200 m)	Steam / EO	4 rolls/cs
SCT6200	6" x 656 ft (15 cm x 200 m)	Steam / EO	2 rolls/cs
SCT8200	8" x 656 ft (20 cm x 200 m)	Steam / EO	2 rolls/cs
SCT12200	12" x 656 ft (30 cm x 200 m)	Steam / EO	1 roll



## Heat Sealers

Compact and easy to operate, each heat sealer comes with instructions for use. Heat sealers are available in 18" (46 cm) and 24" (61 cm) sizes and are ready to use after a short warm up period.

- 1/2" (1.3 cm) seal in approximately two seconds
- If object exceeding 1/8" (3 mm) thickness is in the sealing area, the heat sealer will not operate, providing protection to employees
- Temperature setting can be changed to properly seal paper/poly and Tyvek® packaging products, as well as dust covers



## Heat Sealers

Crosstex Code	Size	Quantity
MHS-002	18"	Each
MHS-003	24"	Each

## CSR Sterilization Wraps

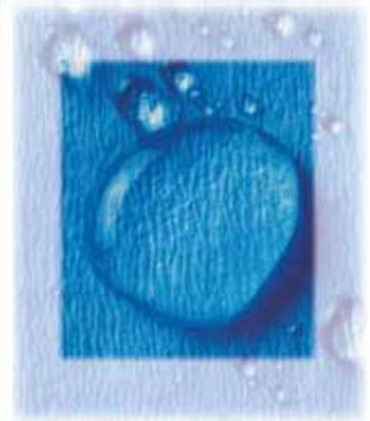
Manufactured from environmentally friendly cellulose material made from wood pulp, not petroleum – Eliminates skin sensitivity issues associated with oily residues inherent in plastic based wrappers.

- Highest BFE (bacterial filtration efficiency) Data available / Highly Permeable (no wet packs) / Cost Effective
- Bacterial barrier to both airborne and waterborne contamination
- Outstanding liquid repellency - water, alcohol, iodine
- Exceptional tensile strength - wet or dry
- Use with EO and Steam sterilization processes
- Even texture to allow for immediate visual detection of small pinholes/tears
- Meets FFA (Flammable Fabrics Act) requirements



## CSR Sterilization Wraps

Crosstex Code	Dimensions	Processes	Quantity
SW12	12" x 12" (30 x 30 cm)	Steam / EO	100/bx, 10/cs
SW15	15" x 15" (38 x 38 cm)	Steam / EO	100/bx, 5/cs
SW18	18" x 18" (46 x 46 cm)	Steam / EO	100/bx, 5/cs
SW20	20" x 20" (51 x 51 cm)	Steam / EO	100/bx, 5/cs
SW24	24" x 24" (61 x 61 cm)	Steam / EO	100/bx, 5/cs
SW30	30" x 30" (76 x 76 cm)	Steam / EO	250/bx, 1/cs
SW36	36" x 36" (91 x 91 cm)	Steam / EO	250/bx, 1/cs
SW40	40" x 40" (102 x 102 cm)	Steam / EO	250/bx, 1/cs
SW48	48" x 48" (122 x 122 cm)	Steam / EO	100/bx, 1/cs
SW54	54" x 54" (137 x 137 cm)	Steam / EO	100/bx, 1/cs





**CROSSTEX** | INDUSTRIAL

Consistent.  
Reliable.  
Innovative.

Your most trusted  
partner for sterilization  
products and  
services.



Monitoring Products for Steam Sterilization

STEAM

STEAM

**CROSSTEX** | INDUSTRIAL

Timely.  
Accurate.  
Experienced.

We're with you  
from start to finish.



Monitoring Products for Ethylene Oxide

EO

EO

**CROSSTEX** | INDUSTRIAL

Trusted.  
Tailored.  
Precise.

We can help you  
ensure the safety  
of your product.



Monitoring Products for Gamma & E-Beam Sterilization

IRRAD

IRRAD

**CROSSTEX** | INDUSTRIAL

Innovative.  
Smart.  
Trusted.

We're your partner for  
sterilization products.



Monitoring Products for Vaporized Hydrogen Peroxide

VH2O2

VH2O2

**CROSSTEX** | INDUSTRIAL

Secure.  
Tested.  
Certified.

We solve problems  
with confidence  
and creativity.



Monitoring Products for Dry Heat

DRY

Steam-Formaldehyde

FORM

Chlorine Dioxide

CLO2

DRY

FORM

CLO2

**CROSSTEX** | INDUSTRIAL

Precise.  
User-friendly.  
Flexible.

We're here to verify your  
product performance.



Quality Control Test Suspensions - Growth Promotion

Precise.  
User-friendly.  
Flexible.

We're here to verify your  
product performance.



Quality Control Test Suspensions - Growth Promotion



## Quality Control Test Suspensions

Crosstex Quality Control (QC) Test Suspensions are ready-to-use microbial suspensions containing a consistent number of microorganisms delivering exceptional accuracy for Qualitative Microbiological Quality Control. A large number of strains are available for applications in the pharmaceutical, medical device, food and water testing industries. QC Test Suspensions can be used as qualitative reference standards in most USP, EP and JP industry methods and pharmacopeial chapters.



- All suspensions comply with the requirement for population of <100 colony forming units (CFUs) and are guaranteed to be within five passages of an original stock culture
- QC Test Suspensions are provided as pure cultures in 2.5 mL or 10 mL volumes containing 25 or 100 doses (0.1 mL each)
- Store suspensions under refrigerated conditions between 2°C to 8°C
- QC Test Suspensions are sold in glass vials with screw-top caps containing a septum. The screw-top cap with septum allows for access using either a pipette or a needle and syringe
- The organisms can be used to manufacture suspensions with population levels up to 10<sup>8</sup>/0.1 mL or higher. Please inquire for information on population levels greater than 100 (CFU's) /0.1 mL for the QC Test Suspension organisms.

Some of the most common testing applications are listed below:

### Growth Media Testing

QC Test Suspensions provide a quality control challenge to each batch or lot of medium, ensuring its growth promoting qualities, whether it is prepared internally from basic ingredients or purchased commercially prepared. Inoculate each batch or lot of medium directly without rehydration, dilution or reconstitution. Visible growth after incubation indicates the culture medium is conducive to organism growth.

### Sterility Assurance Testing

QC Test Suspensions meet the requirements of USP <71>, EP 2.6.1 and JPXV 4.06 Sterility Tests.

### Antimicrobial Effectiveness Testing

QC Test Suspensions can be used when antimicrobial activity is required to prevent microbial proliferation or to limit the effect of contamination.

## Quality Control Test Suspensions

Crosstex Code	Organism	Cell Line	Shelf Life	Volume
GP-01	<i>Bacillus subtilis</i>	6633	14 months	10 mL
GP-02	<i>Clostridium sporogenes</i>	11437	14 months	10 mL
GP25-03	<i>Candida albicans</i>	10231	90 days	2.5 mL
GP-04	<i>Aspergillus brasiliensis</i>	16404	7 months	10 mL
GP-06	<i>Geobacillus stearothermophilus</i>	7953	24 months	10 mL
GP25-07	<i>Pseudomonas aeruginosa</i>	9027	8 weeks	2.5 mL
GP25-08	<i>Staphylococcus aureus</i>	6538	2 months	2.5 mL
GP25-09	<i>Escherichia coli</i>	8739	10 weeks	2.5 mL
GP-10	<i>Bacillus atrophaeus</i>	9372	18 months	10 mL
GP25-11	<i>Salmonella enterica</i>	14028	12 weeks	2.5 mL



## FiberFlo Hollow Fiber Filters

Mar Cor Purification

### FiberFlo® Hollow Fiber Cartridge Filters



Absolute Performance in Filtration Technology



 **MAR COR**  
A Cantel Medical Company

# FiberFlo® Hollow Fiber Cartridge Filters

## Bacteria, Particle and Pyrogen Removal\*

The unique membrane structure of FiberFlo HF cartridge filters provides consistent and verifiable pyrogen removal that surpasses traditional, absolute-rated membrane filters. High level endotoxin, bacteria, and spore removal make these filters ideal for a variety of water purification or process fluid applications

## Longer Lasting

FiberFlo cartridge filters have up to three times the surface area of comparable pleated cartridge filters. This larger membrane surface area provides greater capacity and longer life than pleated filters, resulting in lower filter replacement costs.

\*Only the pore sizes of the FiberFlo 50 and FiberFlo 100 are validated to remove pyrogens

## Quality Assured

FiberFlo cartridge filters are manufactured to medical device quality standards with adherence to QSR manufacturing guidelines. These filters exceed the requirements of USP Class VI Plastics Testing and meet USP standards for purified water extractables. FiberFlo HF cartridge filters are integrity testable by diffusional methods

## Configurations to Fit Your Needs

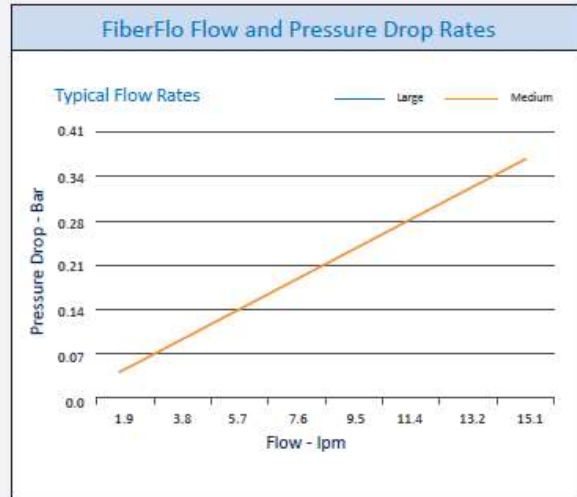
FiberFlo cartridge filters are available in four lengths, four micron ratings, and a variety of endcap styles to fit a variety of standard filter housings.

## Easy to Maintain

FiberFlo HF cartridges filters can be steam sterilized in-line or autoclaved off-line.

## FiberFlo HF Cartridge Filter Features

- Fine filtration
- Longer filter life
- Higher flow rates at lower pressure drops
- Extended life—cleanable, sanitizable
- Removes pyrogens\*
- Autoclavable and steam sterilizable
- Quick rinse-up in ultrapure water
- In-situ integrity testable
- Hydrophilic membranes—repeatedly rewettable without wetting agent
- Biocompatible for life science and medical applications



# Proven Technology for Bacteria, Endotoxin and Spore Removal

## FiberFlo Capsule Membrane Selection

### FiberFlo 50

FiberFlo HF 50 offers the highest degree of control of particulates and microorganisms through its absolute pore removal rating of 0.05  $\mu\text{m}$  and the retentive characteristics of its Polyphen<sup>®</sup> polysulfone membrane. It is recommended for the most demanding bacteria, particle and pyrogen removal applications. FiberFlo HF 50 will remove 100 percent of endotoxin<sup>1</sup> when challenged with a feed concentration of 5.0 EU/ml.

### FiberFlo 100

FiberFlo HF 100 offers the best balance of flow, pressure, retentive capacity, pyrogen removal and cost. Its absolute pore removal rating of 0.1  $\mu\text{m}$  and overall pore structure gives high water flow rates and excellent control of particulates, microorganisms and pyrogens. FiberFlo HF 100 will remove 100 percent of endotoxin<sup>1</sup> when challenged with a feed concentration of 1.0 EU/ml.

### FiberFlo 200

FiberFlo HF 200 offers maximum flow rates without loss of bacteria retention. Absolute removal of *Brevundimonas diminuta* is a characteristic of this filter. The ability of FiberFlo HF 200 to remove bacteria and particulates gives it performance characteristics unmatched by traditional 0.2 micron pleated membrane filters.

### FiberFlo 450

FiberFlo HF 450 is designed for prefiltration and fluid clarification applications. The HF 450 assures maximum protection of downstream sterilizing filters. It provides superior particle control, dirt holding capacity, and flow rates. The ability of the FiberFlo HF 450 to remove particulates is unmatched by traditional 0.45  $\mu\text{m}$  absolute pleated membrane filters.

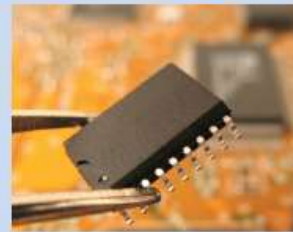
1. Test sensitivity of 0.06 EU/ml.

## Suggested Applications



### Medical and Laboratory

- Medical device rinsing
- Hemodialysis water systems
- Medical equipment rinse water



### Industrial

- Semiconductor
- Deionized water
- Industrial process water
- Dilute inorganic chemical solutions



### Pharmaceutical

- Manufacturing
- Serum and blood fractions
- USP purified water
- Ophthalmics
- Growth media
- Fermentation feed stocks



### Food and Beverage

- Distilled spirits
- Bottled water
- Seltzer
- Vinegar
- Food products
- Makeup and rinse waters



## Technical Data

FiberFlo Hollow Fiber Specifications				
FiberFlo	50	100	200	450
Pore Size mm	0.05 absolute <sup>1</sup>	0.1 absolute <sup>1</sup>	0.2 absolute <sup>1,2</sup>	0.45 absolute <sup>1</sup>
Maximum Flow Rate (per 10" segment)	2.5 GPM	3.0 GPM	3.0 GPM	5.0 GPM
Membrane	Polyphen <sup>®</sup> Polysulfone			
Maximum Differential Pressure	30 PSI (2 Bar)			
Surface Area (per 10" segment)	16 ft <sup>2</sup> (1.5 m <sup>2</sup> )			
Diameter	2.9" (6.4 cm)			
Nominal Length	10", 20", 30", 40" (25 cm, 51 cm, 76 cm, 102 cm)			
Case and End Caps	Polypropylene			
End Seals	Polyurethane			
Extractables	Passes U.S.P. tests for oxidizable substances and total solids for purified water.			
Fiber meets all Class VI criteria as well as test standards for tissue cytotoxicity.				
1. As determined by latex bead challenge. Procedure available upon request.				
2. As determined by HIMA challenge and latex bead challenge.				

## Ordering Information

1. Select type	FiberFlo 50	FiberFlo 100	FiberFlo 200	FiberFlo 450
2. Select length	10 inch	20 inch	30 inch	40 inch
3. Select style				
Style 3: SOE flat, closed end, external 222 O-ring. Replaces Pall Code 3, Millipore Code 0				
Style 4: SOE fin end, external 222 O-ring. Replaces Pall Code 8, Millipore Code 5				
Style 5: SOE fin end, external 226 O-ring. Replaces Pall Code 7, Millipore Code				
Style 7: SOE mini fin end, internal 119 O-ring. Installs in standard 10 inch Ametek Housing*				
Style 8: SOE flat, internal 119 O-ring. Installs in standard 20 inch Ametek Housing*				
*Simple filter bowl modifications are required for this cartridge.				

### How to determine ordering codes:

<b>50</b>	-	<b>10</b>	-	<b>3</b>
Type		Length		Style
50 = FiberFlo 50		10 = 10 inch		3 = Style 3
100 = FiberFlo 100		20 = 20 inch		4 = Style 4
200 = FiberFlo 200		30 = 30 inch		5 = Style 5
450 = FiberFlo 450		40 = 40 inch		7 = Style 7
				8 = Style 8



SOE Flat,  
Closed End



SOE  
Fine End



Internal  
119 O-Ring



External  
222 O-Ring



External  
226 O-Ring

## FiberFlo® Hollow Fiber Cartridge Filters

### Application Brief: Flow and Pressure Drop

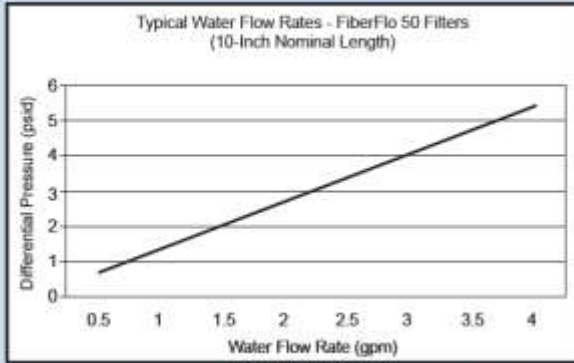
FiberFlo cartridge filters are true absolute filters and have up to three times the surface area of comparable pleated cartridge filters. The absolute rating, based on retention of latex beads, provides higher filtration efficiency than traditional pleated membrane filters. This higher efficiency and smaller pore sizes would normally increase the pressure drop of a filter and decrease filter throughput. However, the high surface area of FiberFlo HF filters distributes fluid flow and filter load over a wider area, lowering pressure drops and improving filter life.



The flow/pressure drop curves below show the typical pressure drop for a 10" segment of each of the FiberFlo Hollow Fiber Filters.

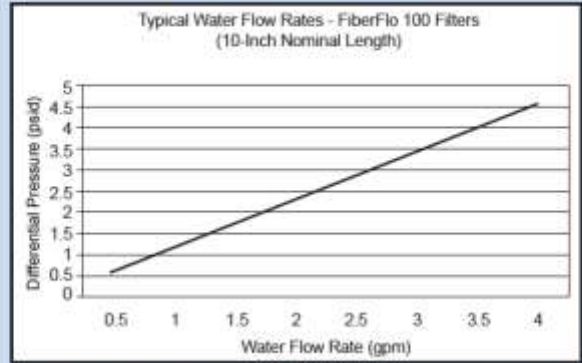
#### FiberFlo 50 Hollow Fiber Cartridge Filters

For Endotoxin Removal, Limited Viral Clearance and Small Particulate Removal



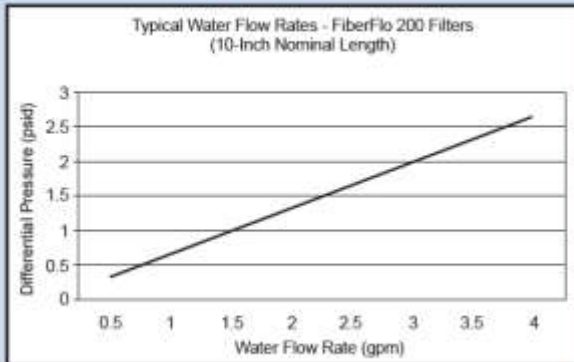
#### FiberFlo 100 Hollow Fiber Cartridge Filters

For Limited Endotoxin Removal, Bacteria Retention and Small Particulate Removal



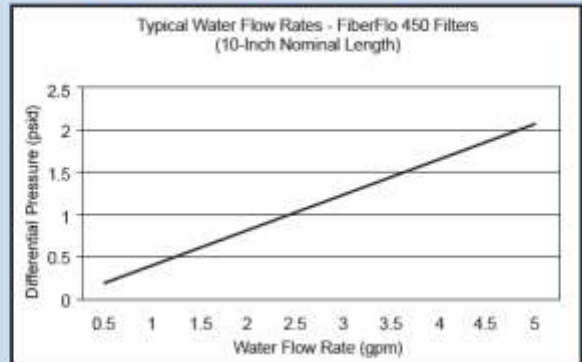
#### FiberFlo 200 Hollow Fiber Cartridge Filters

For Bacterial Retention



#### FiberFlo 450 Hollow Fiber Cartridge Filters

For Bacteria Reduction and Particulate Control



## FiberFlo® Hollow Fiber Filters

### Application Brief: Hot Water Sanitization of Hollow Fiber Filters

#### Heat Compatibility of Hollow Fiber Devices

With reference to the FiberFlo® Medical/Pharmaceutical & Endotoxin filter products, Mar Cor Purification would like to provide clarification regarding the use of hot water for sanitization/disinfection. The filter construction will tolerate limited hours of high temperature operation with water. Excessive operation at temperatures above 65°C will damage the filter integrity. The damage to filter integrity is related to the actual temperature and the number of hours at that temperature. Therefore, with regard to operation at greater than 65°C, Mar Cor Purification can provide the following guidelines with operation in water only:



- Feed water pressure must be maintained below 20 psi and less than 2.5 pressure drop across the filter cartridge.
- Testing and field data indicates that the filters can tolerate 100 sanitization/disinfection cycles at less than 85°C over 6 months without compromising the filter's integrity.
- A sanitization/disinfection cycle is defined as a 4 hour temperature ramp up and a 1 hour hold period, then a 30 minute cool down to ambient temperature. It is important to control the temperature to less than 85°C at all times.
- Unlimited or excessive hot water cycles will damage the filter integrity and void the warranty.



## FiberFlo® EN Endotoxin Removal Filters

### 100% Endotoxin Removal\*

- Removes endotoxin/pyrogen
- Dead end filtration - No waste stream from tangential flow
- Higher flow rates at lower pressure drops
- Autoclavable (121°C) and steam sterilizable
- Extended life—cleanable, sanitizable
- In-situ integrity testable
- Naturally hydrophilic membranes
- Biocompatible for medical application
- Fits inside standard cartridge filter housings



## Consistent and Verifiable Pyrogen Removal

### Endotoxin/Pyrogen Removal

The unique membrane property of FiberFlo EN cartridge and capsule filters provides consistent and verifiable pyrogen removal. The high level of endotoxin removal makes these filters ideal for a variety of applications requiring the removal of endotoxins for assured fluid purity.

\*The FiberFlo filters have been validated to remove 100% of endotoxin at challenge rates up to 5 EU/ml with test sensitivity to 0.06 EU/ml. These levels of endotoxin are commonly found in water systems and process fluid streams, regardless of the diligence of the contamination control personnel.

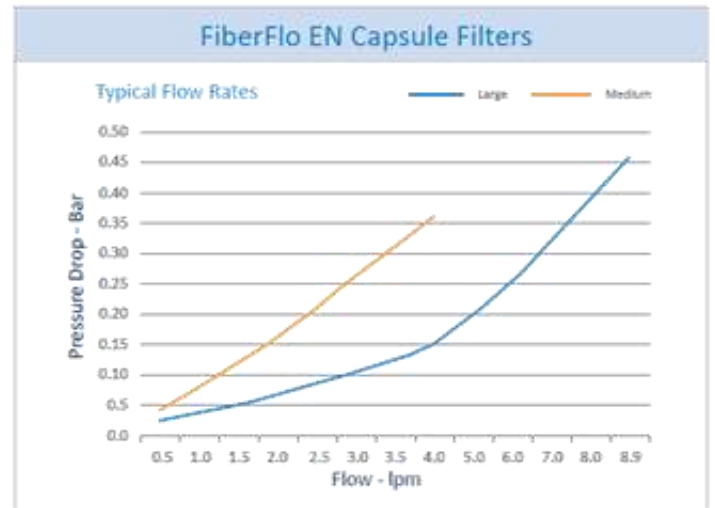
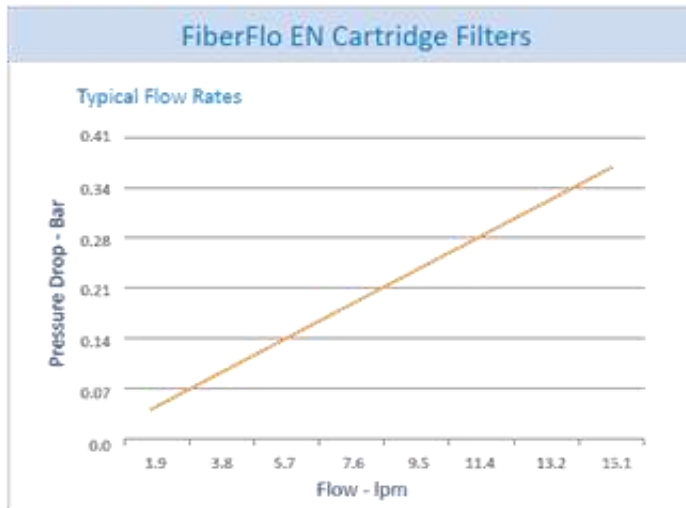
### Easy to install and Maintain

Unlike most tangential flow devices, FiberFlo EN Hollow Fiber cartridge filters can be steam sterilized in-line or autoclaved off-line. FiberFlo EN cartridge filters are available in four lengths and a variety of end cap styles to fit a variety of standard filter housings in process applications. FiberFlo EN capsule filters come in a variety of sizes and have a variety of end connections (Sanitary, Hose Barb and NPT) for easy installation in your equipment.

### Quality Assured

All FiberFlo cartridge and capsule filters are manufactured to meet medical device quality standards with adherence to QSR manufacturing guidelines. These filters exceed the requirements of USP Class VI Plastics Testing and meet USP XXIII standards for purified water extractables. FiberFlo EN cartridge filters are integrity testable by diffusion flow method.

## Pressure Drop and Flow Rates



## Technical Data

### FiberFlo Cartridge Filter Specifications

Membrane	Polyphen <sup>®</sup> Polysulfone
Maximum Differential Pressure	2 Bar (30 PSI)
Membrane Surface Area (Per 10" Segment)	1.5 m <sup>2</sup> (16 ft <sup>2</sup> )
Filter Diameter	6.4 cm (2.9")
Nominal Length	25 cm, 51 cm, 76 cm, 102 cm (10", 20", 30", 40")
Case and End Caps	Polycarbonate
Seal Materials	Medical Grade Polyurethane
Extractables	Passes U.S.P. tests for oxidizable substances and total solids for purified water.

Fiber meets all USP-XXIII Class VI criteria as well as test standards for tissue cytotoxicity.

### FiberFlo Capsule Filter Specifications

Membrane	Polyphen <sup>®</sup> Polysulfone
Maximum Differential Pressure	2 Bar (30 PSI)
Surface Area	M = 0.61 m <sup>2</sup> (2.0 ft <sup>2</sup> ), L = 1.83 m <sup>2</sup> (6.0 ft <sup>2</sup> )
Case and End Caps	Polycarbonate
Extractables	Passes U.S.P. tests for oxidizable substances and total solids for purified water.
Seal Materials	Medical Grade Polyurethane

Fiber meets all USP-XXIII Class VI criteria as well as test standards for tissue cytotoxicity.

### FiberFlo Cartridge Ordering Information

1. Select type	EN	EN	EN	EN
2. Select length	10 in (25 cm)	20 in (51 cm)	30 in (76 cm)	40 in (102 cm)
3. Select style	Style 3: SOE flat, closed end, external 222 O-ring. Replaces Pall Code 3, Millipore Code 0 Style 4: SOE fin end, external 222 O-ring. Replaces Pall Code 8, Millipore Code 5 Style 5: SOE fin end, external 226 O-ring. Replaces Pall Code 7, Millipore Code Style 7: SOE mini fin end, internal 119 O-ring. Installs in standard 10 inch Ametek Housing Style 8: SOE flat, internal 119 O-ring. Installs in standard 20 inch Ametek Housing Example: EN-103 would be a 10-inch, SOE flat, closed end, external 222 O-ring. *Simple filter bowl modifications are required for this cartridge.			

### FiberFlo Capsule Ordering Information\*

Code	Inlet Description	Outlet Description
A	1/4 inch NPT	1/4 inch NPT
B	3/8 inch NPT	3/8 inch NPT
C	1/2 inch hose barb	1/2 inch hose barb
D	3/8 inch hose barb	3/8 inch hose barb
E	1/4 inch NPT	1/2 inch hose barb
F	1/4 inch NPT	3/8 inch hose barb
G	3/8 inch NPT	1/2 inch hose barb
H	Sanitary	Sanitary
J	Mini-ISO	Mini-ISO

Nomenclature Format - x)-EN-y

M - I - EN - K

Capsule Size  
 L = 6.0 ft<sup>2</sup> (0.557 m<sup>2</sup>)  
 M = 2.0 ft<sup>2</sup> (0.185 m<sup>2</sup>)

End-Fitting Option (see chart)

\*Certain Inlet/Outlet configurations are considered custom and have minimum order quantity.

## Mar Cor Purification

# FiberFlo<sup>®</sup> Hollow Fiber Capsule Filters





# FiberFlo Hollow Fiber Capsule Filters

## Bacteria, Particle and Pyrogen Removal

The unique membrane structure of FiberFlo HF capsule filters provides consistent and verifiable pyrogen removal, which is superior to traditional, absolute rated membrane filters. High level endotoxin, bacteria, and spore removal make these point of use filters ideal for a variety of water and process purification applications.

## High Flow Rates

FiberFlo HF capsule filters deliver fine filtration at high flow rates with low pressure drops, performance superior to traditional, pleated membrane capsule filters.

## Longer Lasting

FiberFlo capsules have up to six times the surface area of comparable pleated capsule filters. This larger membrane surface area provides greater capacity and longer life than pleated filters, resulting in lower filter replacement costs.

## Configurations to Fit Your Needs

FiberFlo capsule filters are available in two sizes, five micron ratings, and a variety of endcap styles. Both inline and crossflow configurations are available.

## Quality Assured

Each FiberFlo capsule filter is manufactured to meet medical device quality standards with adherence to QSR manufacturing guidelines. These filters exceed the requirements of USP Class VI Plastics Testing and meet USP XXIII standards for purified water extractables. FiberFlo HF capsule filters are integrity testable by diffusional or forward flow methods.

## Sanitizable

The FiberFlo HF capsule filters with the Polyphen® Polysulfone membrane (FiberFlo 50, 100, 200 & 450) can be autoclaved up to five individual 20 minute cycles at 121°C (250°F) and 15 psig (1 bar). To prevent excessive pressures, do not steam sterilize filters in-line.

The FiberFlo 30 gas and vent capsule filter with the polypropylene membrane cannot be autoclaved.

The FiberFlo HF capsule filters can also be chemically sanitized using a 1% solution of Minncare® Cold Sterilant.

## FiberFlo HF Capsule Filter Features

- Higher flow rates at lower pressure drops
- Extended life—cleanable, sanitizable
- Removes pyrogens\*
- Polyphen® polysulfone filters can be autoclaved
- Quick rinse-up in ultrapure water
- In-situ integrity testable
- Hydrophilic membranes and hydrophobic membranes
- Biocompatible for medical applications

\* FiberFlo 50 and FiberFlo 100 only.



## Proven Technology for Bacteria, Endotoxin and Spore Removal

### FiberFlo Capsule Membrane Selection

#### FiberFlo 30

FiberFlo HF 30 offers very fine filtration for gas and venting applications. This polypropylene hollow fiber filter has an absolute pore removal rating of 0.03µm. The hydrophobic hollow fiber membrane repels water, but can be wetted by an aqueous solution with high surface tension if prewetted with alcohol.

#### FiberFlo 50

FiberFlo HF 50 offers the highest degree of control of particulates and microorganisms through its absolute pore removal rating of 0.05µm and the retentive characteristics of its Polyphen\* polysulfone membrane. It is recommended for the most demanding pyrogen removal applications. FiberFlo HF 50 will remove 100 percent of endotoxin when challenged with a feed concentration of 5.0 EU/ml.\*\*

#### FiberFlo 100

FiberFlo HF 100 offers the best balance of flow, pressure, retentive capacity, pyrogen removal and cost. Its absolute pore removal rating of 0.1µm and overall pore structure gives high water flow rates and excellent control of particulates, microorganisms and pyrogens. FiberFlo HF 100 will remove 100 percent of endotoxin when challenged with a feed concentration of 1.0 EU/ml.\*\*

#### FiberFlo 200

FiberFlo HF 200 offers maximum flow rates without loss of bacteria retention. Absolute removal of *Brevundimonas diminuta* is a characteristic of this filter. The ability of FiberFlo HF 200 to remove bacteria and particulates gives it performance characteristics unmatched by traditional 0.2 micron pleated membrane filters.

#### FiberFlo 450

FiberFlo HF 450 offers high flow rates and high filtration efficiency for clarification and prefiltration applications in biological solutions, ultrapure chemicals and purified water. The 0.45 micron (absolute rating) capsules provide superior particle control and filter life compared to traditional 0.45 micron pleated filters.

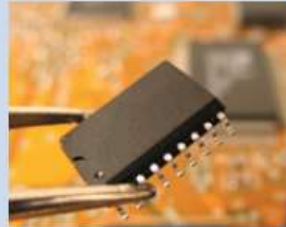
\*\*Test sensitivity of 0.06 EU/ml.

### Suggested Applications



#### Medical and Laboratory

- Medical device rinsing
- Hemodialysis water systems
- Medical equipment rinse water



#### Industrial

- Semiconductor
- Deionized water
- Industrial process water
- Dilute inorganic chemical solutions



#### Pharmaceutical

- Manufacturing
- Serum and blood fractions
- USP purified water
- Ophthalmics
- Growth media
- Fermentation feed stocks



#### Food and Beverage

- Distilled spirits
- Bottled water
- Seltzer
- Vinegar
- Food products
- Makeup and rinse waters

## Technical Data

FiberFlo Hollow Fiber Specifications					
FiberFlo	30	50	100	200	450
Pore Size mm	0.03 absolute <sup>1</sup>	0.05 absolute <sup>2</sup>	0.1 absolute <sup>1</sup>	0.2 absolute <sup>1,2</sup>	0.45 absolute <sup>1</sup>
Membrane	Hydrophobic Polypropylene	Hydrophilic Polyphen <sup>®</sup> Polysulfone			
Sanitization	Not Autoclavable	May be autoclaved up to five 20 minute cycles at 121°C (250°F) and 15 psig (1 bar) and/or Chemical sanitization with 1% Minncare <sup>®</sup> Cold Sterilant			
Maximum Differential Pressure	30 PSI (2 Bar)				
Surface Area	M = 2.0 ft <sup>2</sup> , L = 6.0 ft <sup>2</sup>				
Diameter	M = 1", L = 2"				
Nominal Length	M, L = 6.5"				
Case and End Caps	Polycarbonate				
End Seals	Polyurethane				
Extractables	Passes U.S.P. testing for less than 500 ppb when fed U.S.P. purified water.				
Fiber meets all USP-XXIII Class VI criteria, as well as, test standards for tissue cytotoxicity.					
1. As determined by latex bead challenge. Procedure available upon request.					
2. As determined by HIMA challenge and latex bead challenge.					



Hose Barb\*\*



Sanitary Fitting



MNPT

## Ordering Information

End-fitting options:			
Code	Inlet Description	Outlet Description	Filter Type
A	1/4 inch NPT	1/4 inch NPT	Inline
B	3/8 inch NPT	3/8 inch NPT	Inline
D	3/8 inch hose barb	3/8 inch hose barb	Inline
H	Sanitary	Sanitary	Inline
K	1/4 inch NPT	Luer	Cross Flow
L	3/8 inch hose barb	Luer	Cross Flow

### How to determine ordering codes:

Catalog Number M-C-100-K is a 2.0 square foot capsule filter with cross flow design, a 0.10 micron rating, a quarter inch NPT inlet and a Luer outlet.

<b>M</b>	-	<b>C</b>	-	<b>100</b>	-	<b>K</b>
<u>Cap. Size</u> <u>(Membrane Surface Area)</u>		<u>Inline/Cross Flow</u>		<u>Micron Rating</u>		<u>End-Fitting Option</u> (see chart)
L = 6.0 ft <sup>2</sup> M = 2.0 ft <sup>2</sup>		C = Cross Flow I = Inline		030 = 0.03µM* 050 = 0.05µM 100 = 0.10µM 200 = 0.20µM 450 = 0.45µM		

\* Available with hydrophobic polypropylene hollow fibers only.

\*\* Hose barb endcaps are only available on medium size capsule filters.

FiberFlo and POLYPHEN are registered trademarks of MEDIATOR INC. (formerly known as Minntech Corporation).



## FiberFlo® EN Endotoxin Removal Filters

### 100% Endotoxin Removal\*

- Removes endotoxin/pyrogen
- Dead end filtration - No waste stream from tangential flow
- Higher flow rates at lower pressure drops
- Autoclavable (121°C) and steam sterilizable
- Extended life—cleanable, sanitizable
- In-situ integrity testable
- Naturally hydrophilic membranes
- Biocompatible for medical application
- Fits inside standard cartridge filter housings



## Consistent and Verifiable Pyrogen Removal

### Endotoxin/Pyrogen Removal

The unique membrane property of FiberFlo EN cartridge and capsule filters provides consistent and verifiable pyrogen removal. The high level of endotoxin removal makes these filters ideal for a variety of applications requiring the removal of endotoxins for assured fluid purity.

\*The FiberFlo filters have been validated to remove 100% of endotoxin at challenge rates up to 5 EU/ml with test sensitivity to 0.06 EU/ml. These levels of endotoxin are commonly found in water systems and process fluid streams, regardless of the diligence of the contamination control personnel.

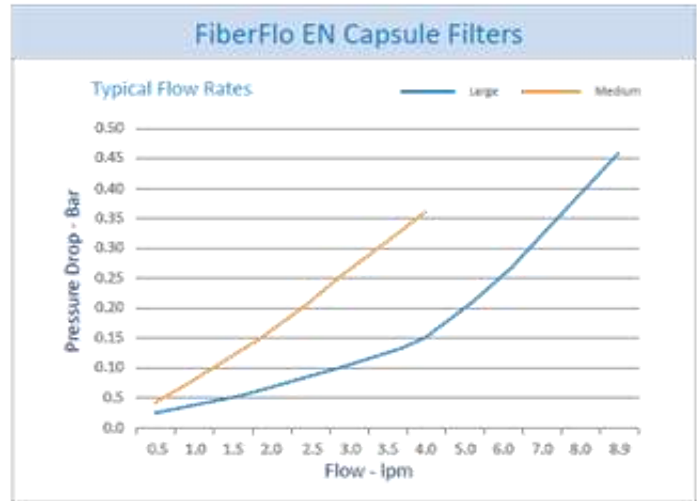
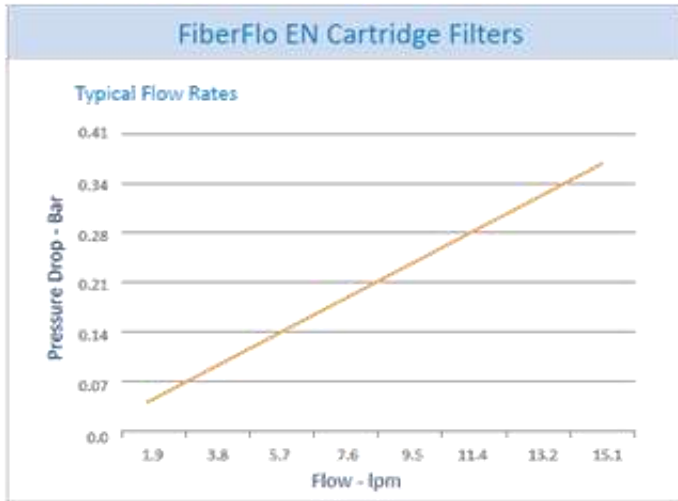
### Easy to Install and Maintain

Unlike most tangential flow devices, FiberFlo EN Hollow Fiber cartridge filters can be steam sterilized in-line or autoclaved off-line. FiberFlo EN cartridge filters are available in four lengths and a variety of end cap styles to fit a variety of standard filter housings in process applications. FiberFlo EN capsule filters come in a variety of sizes and have a variety of end connections (Sanitary, Hose Barb and NPT) for easy installation in your equipment.

### Quality Assured

All FiberFlo cartridge and capsule filters are manufactured to meet medical device quality standards with adherence to QSR manufacturing guidelines. These filters exceed the requirements of USP Class VI Plastics Testing and meet USP XXIII standards for purified water extractables. FiberFlo EN cartridge filters are integrity testable by diffusion flow method.

## Pressure Drop and Flow Rates



## Technical Data

FiberFlo Cartridge Filter Specifications	
Membrane	Polyphen* Polysulfone
Maximum Differential Pressure	2 Bar (30 PSI)
Membrane Surface Area (Per 10" Segment)	1.5 m <sup>2</sup> (16 ft <sup>2</sup> )
Filter Diameter	6.4 cm (2.9")
Nominal Length	25 cm, 51 cm, 76 cm, 102 cm (10", 20", 30", 40")
Case and End Caps	Polycarbonate
Seal Materials	Medical Grade Polyurethane
Extractables	Passes U.S.P. tests for oxidizable substances and total solids for purified water.

Fiber meets all USP-XXIII Class VI criteria as well as test standards for tissue cytotoxicity.

FiberFlo Capsule Filter Specifications	
Membrane	Polyphen* Polysulfone
Maximum Differential Pressure	2 Bar (30 PSI)
Surface Area	M = 0.61 m <sup>2</sup> (2.0 ft <sup>2</sup> ), L = 1.83 m <sup>2</sup> (6.0 ft <sup>2</sup> )
Case and End Caps	Polycarbonate
Extractables	Passes U.S.P. tests for oxidizable substances and total solids for purified water.
Seal Materials	Medical Grade Polyurethane

Fiber meets all USP-XXIII Class VI criteria as well as test standards for tissue cytotoxicity.

FiberFlo Cartridge Ordering Information				
1. Select type	EN	EN	EN	EN
2. Select length	10 in (25 cm)	20 in (51 cm)	30 in (76 cm)	40 in (102 cm)
3. Select style				
Style 3: SOE flat, closed end, external 222 O-ring. Replaces Pall Code 3, Millipore Code 0				
Style 4: SOE fin end, external 222 O-ring. Replaces Pall Code 8, Millipore Code 5				
Style 5: SOE fin end, external 226 O-ring. Replaces Pall Code 7, Millipore Code				
Style 7: SOE mini fin end, internal 119 O-ring. Installs in standard 10 inch Ametek Housing				
Style 8: SOE flat, internal 119 O-ring. Installs in standard 20 inch Ametek Housing				
Example: EN-103 would be a 10 inch, SOE flat, closed end, external 222 O-ring.				
*Simple filter bowl modifications are required for this cartridge.				

FiberFlo Capsule Ordering Information*		
Code	Inlet Description	Outlet Description
A	1/4 inch NPT	1/4 inch NPT
B	3/8 inch NPT	3/8 inch NPT
C	1/2 inch hose barb	1/2 inch hose barb
D	3/8 inch hose barb	3/8 inch hose barb
E	1/4 inch NPT	1/2 inch hose barb
F	1/4 inch NPT	3/8 inch hose barb
G	3/8 inch NPT	1/2 inch hose barb
H	Sanitary	Sanitary
J	Mini-ISO	Mini-ISO
Nomenclature Format - x-I-EN-y		
M	-	I
-	-	EN
-	-	K
Capsule Size		End-Fittings Option
L = 6.0 ft <sup>2</sup> (0.557 m <sup>2</sup> )		(see chart)
M = 2.0 ft <sup>2</sup> (0.185 m <sup>2</sup> )		

\*Certain Inlet/Outlet configurations are considered custom and have minimum order quantity.

## FiberFlo® TF 1680

### Hollow Fiber Crossflow Filtration

FiberFlo TF 1680 Cartridges are made using the unique polysulfone hollow fiber membranes available only from Mar Cor Purification. The TF Cartridge is available in a pore size of 0.1µm and 0.05µm, 0.2µm & 0.45µm pore sizes are available for pre-assessment.

### Dependable Membrane Performance

The Hollow Fiber membrane is produced in a registered FDA medical device facility under an extensive quality program compliant with ISO 13485:2003 standard. Each membrane lot is tested to rigorous standards resulting in very consistent performance not only within each lot but also from lot to lot.

### Hollow Fiber Membrane Structure

Ideal for separation and purification applications, the polysulfone fibers have a graded pore size structure with a "skin" on the inside of the fibers. Fluids, even with varying viscosities, flow easily through the center of the fibers (inside the lumens) with the skin resistant to fouling by materials in the fluids

### Product Configuration

FiberFlo TF 1680 cartridges are available for use in pilot and small production scale environments; stainless steel housing required. The TF 1680 cartridges have much higher membrane surface area than small scale laboratory capsules, also available from Mar Cor Purification, making them ideal for scale up from laboratory batch volumes to pilot and small production batch volumes.



### Typical Applications

The Microfiltration membranes are ideal for many applications in biotechnology that include:

- Latex microparticle washing & coating
- Cell concentration
- Cell Debris removal
- Cell harvest
- Cell perfusion
- Multi-particle washing

### Traceability

Each cartridge has a unique serial number etched into the case. Each is packaged in two sealed plastic pouches. Each shipping carton also contains a Certificate of Compliance and the Directions for Use

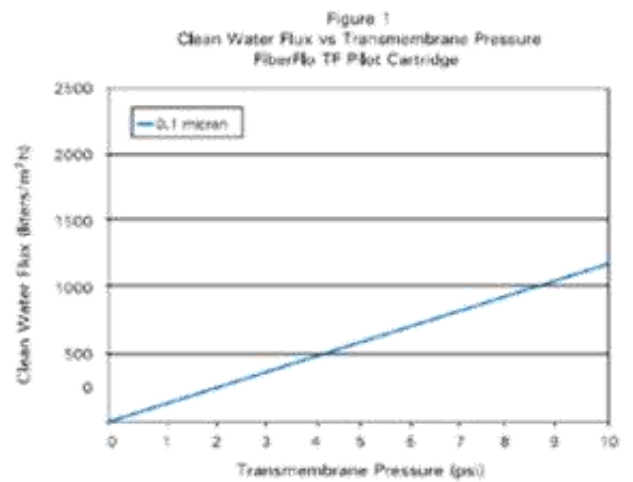


## Technical Data

FiberFlo TF 1680 Specifications	
Membrane Material	Polysulfone Hollow Fiber
Cartridge Cage Material	Polysulfone
Fiber Sealing Technolog	Urethane Potting
Membrane Surface Area	16.8 ft <sup>2</sup> (1.6 m <sup>2</sup> )
Fiber Flow Path Length	9.5" (24 cm)
Cleanliness and Biosafety	
Biosafety	All components meet or exceed USP Class VI-121C plastic test
Oxidizable Substances	Permeate and Retentate meet USP XXIX requirement
Endotoxins	Less than 0.25 EU/m
Operating Characteristics	
Maximum Recommended Trans-Membrane Pressure at 25°C	30 p.s.i
Maximum Continuous Operating Temperature, 200 Hours Total Exposure	80°C
Integrity Test	
Air Diffusion (Inside Lumen to Outside Lumen):	80cc/minute @ 30ps

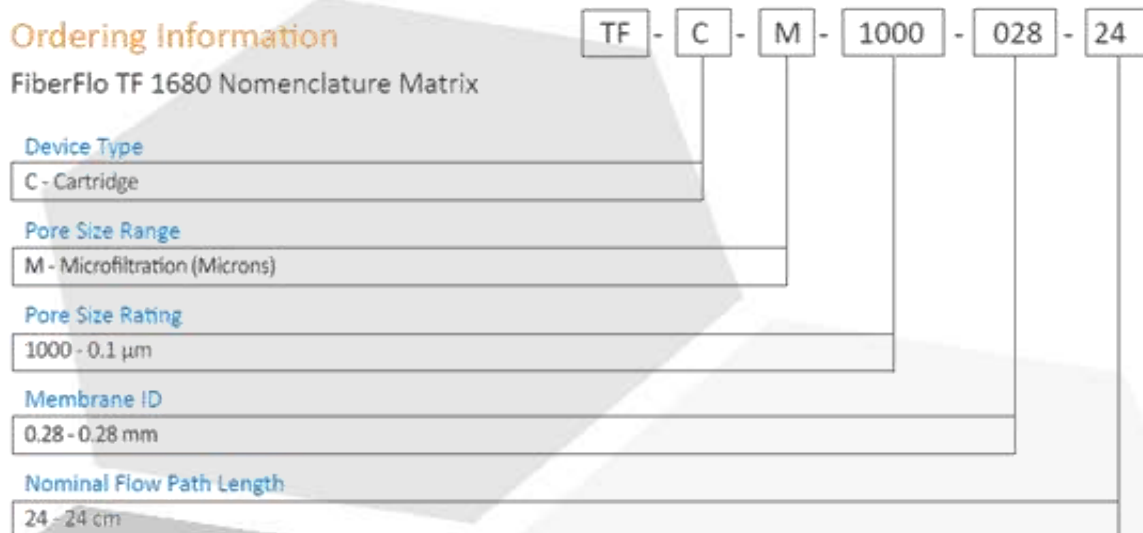
## Clean Water Flux

Figure 1 shows the normalized water flux rate for the 0.1µm pore size filter through a range of transmembrane pressures. This flux data is a guide for system design. Flux rates for solutions will vary depending on solution particulate load and viscosity.



## Ordering Information

### FiberFlo TF 1680 Nomenclature Matrix



## FiberFlo All-Nylon Pleated Filters

### FiberFlo® FPNN Filters

#### All-Nylon Pleated Cartridge Filters

FiberFlo "NN" All-Nylon cartridges are absolute rated. Made with Nylon membrane, cage, core, end caps and support media, the cartridges have high surface area with excellent flow rates per 10 inch length.

Their single-material construction gives them broad compatibility with a wide range of chemicals. The physiological inertness of Nylon makes them suitable for the filtration of a number of chemicals, including Photo Resists, Developers and Solvents

#### Standard Features

- Absolute rated
- Long service life
- All Nylon Construction for
- Maximum Chemical Compatibility
- Homogenous high purity media
- Rigorous quality standards
- Integrity testable in the field

#### Dependable Performance

FiberFlo "NN" cartridges consist of a nylon membrane with thermally bonded nylon components to provide a very durable product with only one material of construction.

The hydrophilic nylon membrane contains no surfactants or surface wetting agents. Manufactured under QSR, the filters are 100% integrity tested in manufacturing to ensure consistent and reliable performance.

Absolute ratings for FiberFlo "NN" cartridges can be verified in the field by integrity testing using bubble point or diffusional flow testing.

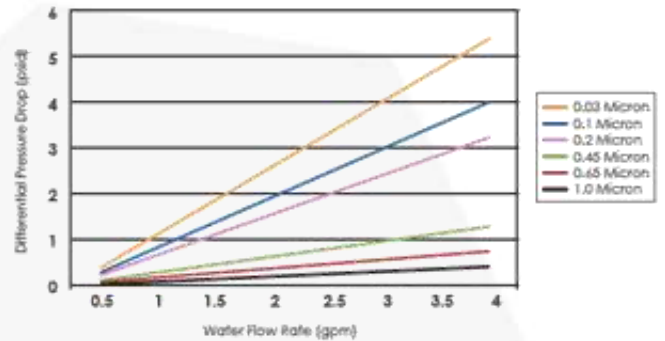
All FiberFlo "NN" cartridges pass USP Class VI plastics tests, as well as, tests for cytotoxicity, hemolysis and pyrogenicity.



#### Applications

- Final filtration for chemical distribution
- Photo Resists and Developer
- Plating solution
- Magnetic coating

#### Typical Water Flow Rate (per 10" length)



## Technical Data

### FiberFlo FPNN Filter Specifications

#### Product Specifications

Filter Media:	Pleated Nylon Membrane
Membrane Support, Core Tube and End Caps:	Nylon
Sealing Technology:	Thermal Bonding
Endotoxins:	Less than 0.5 EU/ml
Biosafety:	All components meet or exceed USP Class VI-121°C plastic tests
FDA Materials:	All components meet the FDA requirements for food contact according to 21 CFR 177-182
Oxidizable Substances:	Filtrate meets or exceeds USP XXI requirements for purified water after 1 liter flush
O-Ring:	Silicone Standard (Other Elastomers available)
O-Ring Color:	Silicone Red (Other elastomers vary)

#### Recommended Integrity Test

Pore Size	Diffusional Flow (cc/min @ Test Pressure) per 10" Length
0.03 µm	< 55 @ 60 psig (4.1 bar)
0.1 µm	< 55 @ 48 psig (3.3 bar)
0.2 µm	< 55 @ 35 psig (2.4 bar)
0.45 µm	< 55 @ 20 psig (1.4 bar)
0.65 µm	< 55 @ 15 psig (1.0 bar)
1.0 µm	< 55 @ 8 psig (0.6 bar)

#### Maximum Operating Pressure

120 psi (7 bar) at inlet

#### Maximum Differential Pressure

Forward Flow	50 psi (4.1 bar) pressure drop at 68°F (20 °C)
Reverse Flow	40 psi (2.7 bar) pressure drop at 68°F (20 °C)

#### Sanitization / Sterilization

Hot Water	Hot Water Flush – Up to 90°C
Chemical Sanitization	Standard concentrations of Minncare® Cold Sterilant, hydrogen peroxide and other chemicals.

#### Cartridge Dimensions

Nominal Length*	Filtration Area
10 inch	6.5 ft <sup>2</sup> / 0.5 M <sup>2</sup>
20 inch	13.0 ft <sup>2</sup> / 1.0 M <sup>2</sup>
30 inch	19.5 ft <sup>2</sup> / 1.5 M <sup>2</sup>
40 inch	26.0 ft <sup>2</sup> / 2.0 M <sup>2</sup>

Outside Diameter: 2.77 in / 7 cm

\*Actual overall length of cartridge will vary depending on configuration. Cartridge performance is as specified regardless of configuration.

#### Product Ordering Information

##### FiberFlo FPNN Nomenclature Matrix

##### Pore Size Rating

003 - 0.03 µm	01 - 0.1 µm	02 - 0.2 µm
045 - 0.45 µm	065 - 0.65 µm	1 - 1.0 µm

##### Length

10 - 10 inch	20 - 20 inch	30 - 30 inch
40 - 40 inch		

FPNN - 003 - 20 - A - V

Elastomer		
End Adapter Code		
Blank - Silicone	V - VITON®	T - FEP encapsulated VITON®
A - 222/flat	B - 222/fin	C - 226/fin
D - DOE Flat Gasket	E - Internal O-Ring/flat	

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## FiberFlo® Pleated Filters

### Application Brief: Cost-Effective Solvent Filtration

#### The Lower Cost Alternative to PTFE\*

Until now, many critical filtration processes for solvents and other harsh chemicals have been performed using very expensive "All Teflon" filters.

Now, Mar Cor Purification offers two less expensive alternatives made using a new, All-Nylon construction along with the proven all-polypropylene construction. These far less costly filters give users the ability to achieve high quality filtration without the high cost of PTFE.

#### Single-Material for Broad Chemical Compatibility

Mar Cor Purification offers two pleated filters made using single materials for consistent chemical compatibility.

The New FiberFlo FPNN All Nylon membrane filters made using Nylon membrane and hardware, plus the FiberFlo FPPM All Polypropylene membrane filters with polypropylene membrane and hardware provide a cost effective alternative for filtering a broad range of chemicals.

#### Filtering Solvents in a Critical Environment

Filtering solvents in a critical environment, like pharmaceutical manufacturing or semiconductor production, requires high purity and reliable performance.

FiberFlo pleated filters are made to exacting standards, provided to users with supporting documentation on cleanliness and can be integrity tested in-situ to assure performance.

On the following page is a table showing the compatibility of selected FiberFlo Pleated Filters with solvents typically found in critical environments.



#### Notes

\*PTFE - Polytetrafluoroethylene

## Clean Solvent FiberFlo Pleated Filter Cartridge Compatibility Chart

Solvent Or Reagent Name	CAS #	All Polypropylene	All Nylon
Acetone	67-64-1	NR	R
Acetophenone	98-86-2	NR	R
Amyl Acetate	628-63-7	R	LR
Anisole	100-66-3	R	--
Cellosolve	110-80-5	R	R
Chloroform	67-66-3	LR	NR
Cyclohexanone	108-94-1	LR	R
Diethylamine	109-98-7	R	R
Dimethyl Formamide	68-12-2	R	R
Dimethyl Sulfoxide	67-68-5	R	R
Dioxane	123-91-1	LR	R
Ether	60-29-7	NR	R
Ethyl Acetate	141-78-6	LR	R
Ethyl Ether	60-29-7	LR	R
Ethylene Dichloride	107-06-2	LR	R
Formaldehyde (37%)	50-00-0	R	NR
Formaldehyde (4%)	50-00-0	R	NR
Heptane	142-82-5	NR	R
Hexane	110-54-3	NR	R
HMDS (src)	999-97-3	R	--
Isopropyl Acetate	108-21-4	R	R
Isopropyl Alcohol	67-63-0	R	R
Methyl Acetate	79-20-9	LR	R
Methyl Ethyl Ketone	78-93-3	LR	R
Methyl Isobutyl Ketone	108-10-1	R	R
Methylene Chloride	75-09-2	LR	LR
T-Butanol (Butyl Alcohol)	75-65-0	R	R
THF	109-99-9	NR	R
Toluol	108-88-3	NR	R
Triethylamine	121-44-8	NR	R

R = Resistant, no significant effect

LR = Limited Resistance, minor effects such as slight swelling or discoloration

NR = Not Recommended, Significant effects

-- = No Data

## FiberFlo Pleated and PreFilters

### FiberFlo Pleated Filters

#### Polypropylene Pleated Cartridge Filters

##### Standard Features

- Increased dirt holding capacity
- Long service life
- Homogenous high purity media
  - Homogeneous high purity media. Fibers free of residual extrusion oils, surfactants, antistatic agents and resin binders.
- Stratified pore structure
  - Stratified pore structure allows separation of solids along a size gradient.
- Rigorous quality standards
  - Rigorous quality standards for polypropylene selected.
- High surface area.
- Meets FDA requirements for food contact.
- Results in particle entrapment throughout depth of media, reducing surface blinding and increasing dirt holding capacity.
- Exhibits very low protein binding characteristics. Meets USP XXI Class VI Plastic Tests, as well as, tests for cytotoxicity, hemolysis and pyrogenicity.



##### Flow Rates

The following table represents typical water flow at a one psi (69 mbar) pressure differential across a single 10-inch cartridge element. The test fluid is water at ambient temperature. Extrapolation for housings with multiple elements and higher pressure drops is acceptable; but as flows increase, the pressure drop of the housing becomes more apparent.

Typical Flow Rate								
Pore Size	0.22 µm	0.45 µm	1.0 µm	3.0 µm	5.0 µm	10.0 µm	30.0 µm	60.0 µm
GPM	3.0	5.0	8.0	12.0	16.0	18.0	>20	>20
LPM	11.35	18.92	30.28	45.42	60.56	68.13	75.70	75.70



## Technical Data

### FiberFlo Polypropylene Pleated Cartridge Specifications

#### Product Specifications

Filter Media:	Pleated Polypropylene Depth Media
Membrane Support, Core Tube and End Caps:	Polypropylene
O-Ring:	Silicone
O-Ring Color:	Red
Maximum Differential Pressure at 68°F (20 °C)	Forward: 50 psi (3.4 bar) at 68°F (20°C) - Reverse: 40 psi (2.7 bar) at 68°F (20°C)
Operating Temperature:	Maximum 180°F (82°C) at 10 psi (0.69 bar) in water
Micron Ratings	0.2, 0.4, 1.0, 3.0, 5.0, 10, 30, and 60

#### Cartridge Dimensions

Nominal Length*	Filtration Area
10 inch	5.8 ft <sup>2</sup> / 0.54 m <sup>2</sup>
20 inch	11.6 ft <sup>2</sup> / 1.08 m <sup>2</sup>
30 inch	17.4 ft <sup>2</sup> / 1.62 m <sup>2</sup>
40 inch	23.2 ft <sup>2</sup> / 2.16 m <sup>2</sup>

Outside Diameter: 2.75 in / 7 cm

\*Actual overall length of cartridge will vary depending on configuration. Cartridge performance is as specified regardless of configuration.

#### End Fitting/Sealing Options

End Fitting	Sealing Options
SOE-222 O-Ring/Flat Bottom	(Code 3)
SOE-222 O-Ring/Fin	(Code 8)
SOE-226 O-Ring/Fin	(Code 7)
DOE-Flat Gasket/Flat Gasket	(Code DOE)
SOE-119 Internal O-Ring	(Ametek)

## FiberFlo A Pleated Filters

### Polyethersulfone Pleated Cartridge Filters

FiberFlo "A" polyethersulfone cartridges are absolutely rated cartridge filters. Made of polyethersulfone membrane, the filters have an increased surface area with excellent flow rates per 10 inch lengths. Their compatibility with a broad range of chemicals and physiological inertness makes them suitable for the filtration of sera, diagnostic reagents, biological fluids, acids, bases, water and solvents.

### Dependable Performance

FiberFlo "A" cartridges consist of a polyethersulfone membrane with thermally bonded polypropylene components to provide a very durable filter with only two materials of construction.

The unique hydrophilic polyethersulfone membrane contains no surfactants or surface wetting agents.

Manufactured under QSR, representative samples from each manufacturing lot are tested for integrity to ensure consistent performance.

All FiberFlo "A" cartridges pass USP XXI class VI plastic tests, as well as, tests for cytotoxicity, hemolysis and pyrogenicity.

### Applications

- Final filtration for bacteria removal in reverse osmosis, deionization and other high purity water systems
- Beverage and wine filtration/clarification
- Photographic solutions
- Plating solutions
- Magnetic coatings



### Standard Features

- Absolute rated
- Homogenous high purity media
- Rigorous quality standards
- Long service life
- Pre-Flushed for quick Rinse up

Cartridge Dimensions	
Nominal Length*	Filtration Area
10 inch	7 ft <sup>2</sup> / 0.65 m <sup>2</sup>
20 inch	14 ft <sup>2</sup> / 1.30 m <sup>2</sup>
30 inch	21 ft <sup>2</sup> / 1.95 m <sup>2</sup>
40 inch	28 ft <sup>2</sup> / 2.60 m <sup>2</sup>

Outside Diameter: 2.75 in / 7.0 cm

\*Actual overall length of cartridge will vary depending on configuration. Cartridge performance is as specified regardless of configuration.

## FiberFlo NY Pleated Filters

### Polypropylene Pleated Cartridge Filters

FiberFlo "NY" nylon 6,6 cartridges are absolute rated cartridge filters. Made of nylon membrane, the filters have an increased surface area with excellent flow rates per 10 inch lengths.

Nylon is compatible with a broad range of chemicals. FiberFlo "NY" filters provide an economical alternative for the filtration of water, acids, bases, solvents, and other process fluids.

### Dependable Performance

FiberFlo "NY" cartridges consist of a nylon membrane with thermally bonded polypropylene components to provide a very durable filter with only two materials of construction.

The nylon membrane contains no surfactants or surface wetting agents. Manufactured under QSR, the filters are integrity tested in manufacturing to ensure consistent and reliable performance, and flushed with 17+ megohm cm water to remove any manufacturing debris.

Each FiberFlo "NY" cartridge filter is manufactured under QSR, representative samples from each manufacturing lot are tested for integrity to ensure consistent performance.

All FiberFlo "NY" cartridges pass USP XXI class VI plastic tests, as well as, tests for cytotoxicity, hemolysis and pyrogenicity.

### Standard Features

- Absolute rated
- Homogenous high purity media
- Rigorous quality standards
- Long service life



### Applications

- Filtration for bacteria removal in reverse osmosis, deionization and other high purity water systems
- Particle filtration for ultrapure chemicals
- Photographic solutions
- Plating solutions
- Magnetic coatings

Cartridge Dimensions	
Nominal Length*	Filtration Area
10 inch	7.0 ft <sup>2</sup> / 0.65 m <sup>2</sup>
20 inch	14.0 ft <sup>2</sup> / 1.3 m <sup>2</sup>
30 inch	21.0 ft <sup>2</sup> / 1.95 m <sup>2</sup>
40 inch	28.0 ft <sup>2</sup> / 2.6 m <sup>2</sup>

Outside Diameter: 2.75 in / 7.0 cm

\*Actual overall length of cartridge will vary depending on configuration. Cartridge performance is as specified regardless of configuration.



## FiberFlo PM Pleated Filters

### Polypropylene Pleated Cartridge Filters

FiberFlo "PM" polypropylene cartridges are absolutely rated cartridge filters. Made of polypropylene membrane, the filters have an increased surface area with excellent flow rates per 10 inch lengths.

Their compatibility with a broad range of chemicals makes them suitable for the filtration of acids, bases, water and solvents.

The hydrophobic nature of the membrane makes "PM" filters an economical alternative to polytetrafluoroethylene (PTFE) membrane filters in air, process gas and vent filter applications.

### Dependable Performance

FiberFlo "PM" cartridges consist of a polypropylene membrane with thermally bonded polypropylene components to provide a very durable filter with a single material of construction.

The unique hydrophobic polypropylene membrane contains no surfactants or surface wetting agents. Manufactured under QSR, samples from each manufacturing lot are tested by water intrusion to ensure consistent and reliable performance, and rinsed with 17+ magohm cm water to remove any manufacturing debris.

All FiberFlo "PM" cartridges pass USP XXI class VI plastic tests as well as tests for cytotoxicity, hemolysis and pyrogenicity.

### Standard Features

- Hydrophobic membrane
- Absolute rated
- Homogenous high purity media
- Rigorous quality standards
- Economical filtration
- Long service life



### Applications

- Final filtration for high purity process chemicals
- Economical air or process gas filtration
- Tank vent filtration

Cartridge Dimensions	
Nominal Length*	Filtration Area
10 inch	7 ft <sup>2</sup> / 0.65 m <sup>2</sup>
20 inch	14 ft <sup>2</sup> / 1.30 m <sup>2</sup>
30 inch	21 ft <sup>2</sup> / 1.95 m <sup>2</sup>
40 inch	28 ft <sup>2</sup> / 2.60 m <sup>2</sup>

Outside Diameter: 2.75 in / 7.0 cm

\*Actual overall length of cartridge will vary depending on configuration. Cartridge performance is as specified regardless of configuration.

## FiberFlo T Pleated Filters

### Polytetrafluoroethylene (PTFE) Pleated Cartridge Filters

FiberFlo PTFE cartridge filters provide microfilter users with reliable flow rates, chemical compatibility, economical filtration, and solvent compatibility. Containing 7.0 square feet of expanded PTFE membrane, FiberFlo PTFE Filters offer users a highly efficient hydrophobic "barrier", ensuring low moisture content of ultrapure gasses. Additionally, it will ensure filtration performance in the purification of aggressive liquids and organic solvents. Each FiberFlo PTFE cartridge filter is manufactured under QSR; representative samples from each manufacturing lot are tested for integrity to ensure consistent performance.



### Standard Features

- Reliable liquid flow rates
- Dependable air flow rates
- Broad chemical compatibility
- Broad range of pore size options
- Superior hydrophobicity
- Economical filtration

### Applications

- Photoresists
- Compressed gas
- Electronic grade solvents
- Pharmaceutical and intermediate solvents
- Hot deionized water
- Tank vents

### Flow Rates

The following table represents typical water flow at a one psi (69 mbar) pressure differential across a single 10-inch cartridge element. The test fluid is water at ambient temperature. Extrapolation for housings with multiple elements and higher pressure drops is acceptable, but as flows increase the pressure drop of the housing becomes more apparent.

Typical Flow Rate				
Pore Size	0.1 µm	0.22 µm	0.45 µm	1.0 µm
GPM	1.25	2.8	5.7	18.0
SCFM	> 26	> 42	> 68	> 85
Pore Size Rating (Gas)	0.01 µm	0.02 µm	0.05 µm	0.1 µm

## Request FORM / Talep Formu

E-MAIL: [info@temizodamarketi.com](mailto:info@temizodamarketi.com) FAKS-NO: +90.216.573 09 96

Please fill in this form and fax it back to us. / Lütfen formu doldurup bize geri yollayınız.

Our expert customer service team will contact you directly. / Uzman arkadaşlarımız sizinle temasa geçeceklerdir.

Page/Sayfa	Article / Ürün Adı	Quantity / Miktar	Colour / Renk	Size / Beden

### Notes / Not:

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Please specify your cleanroom classes / Lütfen temizoda sınıfınızı belirtiniz:

ISO-3  ISO-4  ISO-5  ISO-6  ISO-7  ISO-8  ISO-9  NONE

A  B  C  D

Is your cleanroom / Temizodanız;

- Purely particle controlled area / Tamamen partikül kontrollü  
 Particle and microbiological controlled area /  
Partikül ve mikrobiyolojik kontrollü alan  
 A non-controlled cleanroom / Kontrolsüz temizoda

Address / Company stamp

Phone/Fax:

I am also interested in the following information / Ayrıca lütfen aşağıdaki konularda da bilgi veriniz.

- |                          |   |                                    |
|--------------------------|---|------------------------------------|
| <input type="checkbox"/> | 1 | TECHNICAL DOKUMENTATION            |
| <input type="checkbox"/> | 2 | CLEANROOM GARMENTS                 |
| <input type="checkbox"/> | 3 | UNDERGARMENTS                      |
| <input type="checkbox"/> | 4 | CLEANROOM SERVICE                  |
| <input type="checkbox"/> | 5 | SHOES                              |
| <input type="checkbox"/> | 6 | DISPOSABLE AND PROTECTIVE CLOTHING |
| <input type="checkbox"/> | 7 | GLOVES AND FINGER COTS             |
| <input type="checkbox"/> | 8 | CLEANROOM PAPER AND ACCESSORIES    |
| <input type="checkbox"/> | 9 | CLEANROOM WIPES                    |

- |                          |   |                       |
|--------------------------|---|-----------------------|
| <input type="checkbox"/> | → | CLEANING PRODUCTS     |
| <input type="checkbox"/> | → | DISINFECTION PRODUCTS |
| <input type="checkbox"/> | → | TACKY MATS            |
| <input type="checkbox"/> | → | FILTERS               |
| <input type="checkbox"/> | → | FURNITURE             |
| <input type="checkbox"/> | → | DISPENSERS            |
| <input type="checkbox"/> | → | MISCELLANEOUS         |
| <input type="checkbox"/> | → | DRY FOG TECHNOLOGY    |

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