

Xcellent®

Want Safe and Comfort... TRY Xcellent!

A Professional Glove Solution Provider



About Xcellent

Xcellent Safety is a privately held German company specializing in the development and manufacture of high-quality protective gloves and sleeves. Our modern, state-of-the-art production facilities, in combination with a very experienced and talented R&D team, provides our customers with high quality and innovative products.

We also liaise closely with our distribution partners and listen carefully to what end users need. The feedback flows directly into product development - for gloves that not only fulfil standards, but exceed expectations.

If you want Safe and Comfort... TRY Xcellent!

+ High Quality

Xcellent Safety GmbH manufactures a wide range of high quality gloves. We are constantly innovating and developing new technologies to improve our quality and make our gloves safer, more comfortable and more durable.

+ Customization & Flexibility

Thanks to our professional research and development team, we are able to customize most new products quickly for industrial projects by understanding the demand, selecting the right raw materials, doing proper formulation and controlling the quality during production.



Yarns Wrapping and Spinning Workshop



Dipping Production Line



Knitting Machines

+ Innovation and Continuous Quality Improvement

At Xcellent, we have been innovating and improving our quality in order to offer our end users the best products and to secure the business of our dealers in the work glove market.

We have developed new technologies to make Xcellent products with great performance and different from most others on the market.



PremiCut Technology™

A technology makes the cut protection gloves thinner, more smooth, softer and comfortable, reduces the hand fatigue.



X-Diamond Technology™

New technology and material to replace the current most common HPPE cut protection gloves, it is much stronger and more durable than HPPE. No glass fiber or steel fiber needed to enhance the cut protection, which makes the gloves thinner, more flexible and comfortable, no worries of skin alleagry caused by glass fiber. Cool feeling for whole day comfort.



XTech PU Technology™

A technology to make the polyurethane coating softer, thicker and better grip performance.

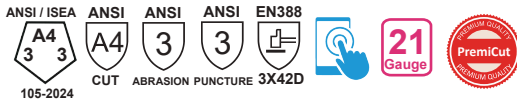
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new



21-700S



Liner: 21 gauge, PremiCut
Coating: XTech Polyurethane

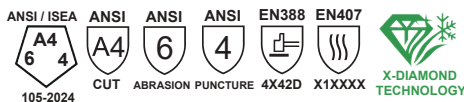
Size Range: XS, S, M, L, XL, 2XL
Packed: 12 Dozen / Case

21-700

PremiCut Technology™, ultra-thin 21 gauge cut level A4 glove with XTech PU coating.

- 21 gauge knitting with PremiCut technology contributes to an ultra-thin, barehand dexterity, extreme comfortable and perfect fitting glove. Ideal for precision works and high dexterity demanding works.
- Tactile sensitivity and minimum hand fatigue.
- The reinforcement in the crotch greatly extends the glove life and offers extra protection.
- Touch screen functionality.

new



Liner: X-Diamond
Coating: Sandy nitrile

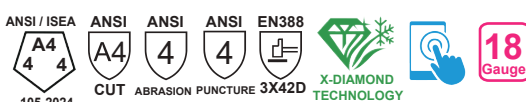
Size Range: XS, S, M, L, XL, 2XL
Packed: 12 Dozen / Case

18-950

New innovative X-Diamond™ 18 gauge cut level A4 glove, sandy nitrile coating. Stronger, Thinner and More Comfortable. Cool feeling, touch screen function.

- Engineered with new X-Diamond technology yarn material, which is much stronger and durable than common cut protection glove yarns. No glass fiber or steel fiber needed to enhance the cut protection, which makes the glove thinner and more comfortable, no worries of skin allergy caused by glass fiber. A game changer to cut protection gloves.
- Ultra-thin, super dexterity, flexibility and comfort. Perfect fitting and cool feeling for all day comfort.
- Sandy nitrile coating offers great grip performance and oil resistance.
- The reinforcement in the crotch greatly extends the glove life and offers extra protection.
- Touch screen function.

new



Liner: X-Diamond
Coating: XTech Polyurethane

Size Range: XS, S, M, L, XL, 2XL
Packed: 12 Dozen / Case

18-951

New innovative X-Diamond™ 18 gauge cut level A4 glove, PU coating. Stronger, Thinner and More Comfortable. Cool feeling, touch screen function.

- Engineered with new X-Diamond technology yarn material, which is much stronger and durable than common cut protection glove yarns. No glass fiber or steel fiber needed to enhance the cut protection, which makes the glove thinner and more comfortable, no worries of skin allergy caused by glass fiber. A game changer to cut protection gloves.
- Ultra-thin, super dexterity, flexibility and comfort. Perfect fitting and cool feeling for all day comfort.
- X-Tech PU coating offers good grip performance and sensitivity.
- The reinforcement in the crotch greatly extends the glove life and offers extra protection.
- Touch screen function.

18-991

Eco-friendly, PremiCut technology™, ultra thin 18 gauge cut level A6 gloves with sandy nitrile coating, Super dexterity and comfort.

- Engineered with PremiCut technology, 18 gauge cut protection level A6, ultra thin, super dexterity, flexibility and comfort.
- Eco-friendly, to protect our planet and workers. 1 pair equates about 1 bottle of 500ml reclaimed and recycled, taken out of landfill and 18 gram CO₂ reduced vs using virgin polyester material.
- Super dexterity, fitting and flexibility makes it ideal for both general work and precision work.
- Thanks to high quality nitrile coating, it offers great grip performance, oil resistance and durability.
- The reinforcement in the crotch greatly extends glove life to save your cost and provides extra protection in the weakest area.



Liner: 18 gauge, PremiCut, recycled polyester
Coating: Sandy nitrile

Size Range: XS, S, M, L, XL, 2XL
Packed: 12 Dozen / Case

18-992

Eco-friendly, PremiCut technology™, ultra thin 18 gauge cut level A6 gloves with PU coating, Super dexterity and comfort.

- Engineered with PremiCut technology, 18 gauge cut protection level A6, ultra thin, super dexterity, flexibility and comfort.
- Eco-friendly, to protect our planet and workers. 1 pair equates about 1 bottle of 500ml reclaimed and recycled, taken out of landfill and 18 gram CO₂ reduced vs using virgin polyester material.
- Super dexterity, fitting and flexibility makes it ideal for both general work and precision work.
- The reinforcement in the crotch greatly extends glove life to save your cost and provides extra protection in the weakest area.
- Touch screen functionality.



Liner: 18 gauge, PremiCut, recycled polyester
Coating: XTech Polyurethane

Size Range: XS, S, M, L, XL, 2XL
Packed: 12 Dozen / Case

18-994

PremiCut technology™, ultra thin 18 gauge cut level A6 gloves with PU coating, Super dexterity and comfort.

- Engineered with PremiCut technology, 18 gauge cut protection level A6, ultra thin, super dexterity, flexibility and comfort.
- Special Xcellent XTech PU formulation contributes to great grip performance and extra softness and comfort.
- Super dexterity, fitting and flexibility makes it ideal for both general work and precision work.
- The reinforcement in the crotch greatly extends glove life to save your cost and provides extra protection in the weakest area.
- Touch screen functionality.



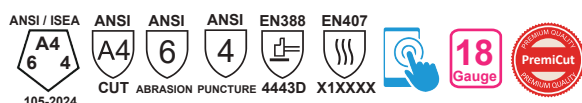
Liner: 18 gauge, PremiCut
Coating: XTech Polyurethane

Size Range: XS, S, M, L, XL, 2XL
Packed: 12 Dozen / Case

18-971

Premium quality 18 gauge cut protection level A4 glove, PremiCut technology™, sandy nitrile coating. Very comfortable, smooth and cool feeling.

- Engineered with PremiCut technology, it is ultra thin, very smooth and comfortable, super dexterity, tactile sensitivity and flexibility.
- Thanks to a high quality nitrile coating, it offers great grip performance, oil resistance and durability.
- The reinforcement in the crotch greatly extends glove life to save your cost and provides extra protection in the weakest area.
- Cool feeling and breathability for all day comfort.
- Touch screen functionality.



Liner: 18 gauge, PremiCut

Coating: Sandy nitrile

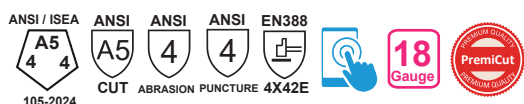
Size Range: XS, S, M, L, XL, 2XL

Packed: 12 Dozen / Case

18-972

Premium quality 18 gauge cut protection level A5 glove, PremiCut technology™, XTech PU coating. Barehand dexterity, tactile sensitivity and very comfortable.

- Engineered with PremiCut technology, it is ultra thin, very smooth and comfortable, barehand dexterity and flexibility. Tactile sensitivity and minimum hand fatigue.
- Special Xcellent XTech PU formulation contributes to great grip and extra softness and comfort.
- The reinforcement in the crotch greatly extends glove life to save your cost and provides extra protection in the weakest area.
- Cool feeling and breathability for all day comfort.
- Touch screen functionality.



Liner: 18 gauge, PremiCut

Coating: XTech Polyurethane

Size Range: XS, S, M, L, XL, 2XL

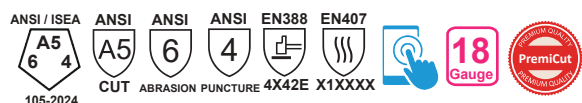
Packed: 12 Dozen / Case

Available July 1, 2026

18-985

Premium quality 18 gauge cut protection level A5 glove, PremiCut technology™, micro-foam nitrile coating and dots. Very comfortable, super grip and additional durability.

- Engineered with PremiCut technology, it is ultra thin, very smooth and comfortable, super dexterity, tactile sensitivity and flexibility.
- Thanks to a high quality nitrile coating and nitrile dots, it offers super grip performance and additional durability and heat protection.
- The reinforcement in the crotch greatly extends glove life to save your cost and provides extra protection in the weakest area.
- Cool feeling and breathability for all day comfort.
- Touch screen functionality.



Liner: 18 gauge, PremiCut

Coating: Micro-foam nitrile, nitrile dots

Size Range: XS, S, M, L, XL, 2XL

Packed: 12 Dozen / Case

18-997

PremiCut technology™, 18 gauge cut level A6 glove, perfect dexterity and fitting. Ideal for both general and precision works. Long Cuff.



Liner: 18 gauge, PremiCut

Size Range: XS, S, M, L, XL, 2XL

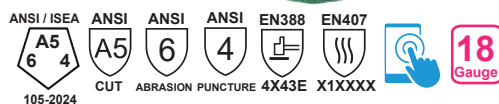
Coating: No coating

Packed: 12 Dozen / Case

Available July 1, 2026

12-900

18 gauge cut level A5, sandy nitrile coating, perfect dexterity, fitting and flexibility.



Liner: 18 gauge, UHMWPE, glass fiber, steel fiber, polyester

Size Range: S, M, L, XL, 2XL, 3XL

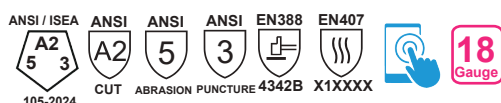
Coating: Sandy nitrile

Packed: 12 Dozen / Case

Available July 1, 2026

18-931

18 gauge cut level A2, micro-foam nitrile coating, perfect dexterity, fitting and flexibility.



Liner: 18 gauge, UHMWPE, glass fiber, nylon

Size Range: XS, S, M, L, XL, 2XL

Coating: Micro-foam nitrile

Packed: 12 Dozen / Case

CUT PROTECTION

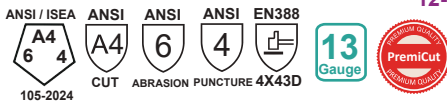
12-350

PremiCut technology™, 13 gauge cut level A4 glove with XTech PU coating. About 20% lighter, extra softness and additional comfort.

- A proven best seller and outstanding 13 gauge cut level A4 PU glove.
- Thanks to Xcellent PremiCut technology, it is about 20% thinner than many traditional similar gloves on the market, much softer, smooth and comfortable.
- Special Xcellent XTech PU formulation contributes to great grip performance and extra softness and comfort.
- Ergonomic, sensitivity and great dexterity.



12-351



Liner: 13 gauge, PremiCut
Coating: XTech Polyurethane

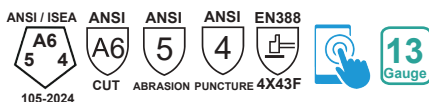
Size Range: XS, S, M, L, XL, 2XL
Packed: 12 Dozen / Case

Available August 1, 2026

12-381

13 gauge cut level A6 glove with PU coating, reinforced in the crotch, touch screen function.

- Great knitting technology along with quality materials make it a 13 gauge cut level A6 glove retains softness, comfort and dexterity.
- Special PU formulation contributes to better grip performance and additional durability.
- Reinforcement greatly extends glove life to save your cost and provides extra protection.
- 10-finger touch screen function enables you to use all touch screen device on the job



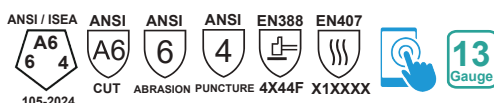
Liner: 13 gauge, UHMWPE, steel fiber, glass fiber, others
Coating: Polyurethane

Size Range: XS, S, M, L, XL, 2XL
Packed: 12 Dozen / Case

12-387

Premium 13 gauge cut level A6 glove with sandy nitrile coating, reinforced in the crotch, touch screen function. High visibility colour.

- Premium cut protection level A6 glove with great abrasion resistance.
- Very good grip performance in both dry and little oily work conditions.
- Soft, flexible and comfortable. Good fitting.
- 10-finger touch screen function enables you to use touch screen devices during work.
- Reinforcement greatly extends glove life to save your cost and provides extra protection.
- High visibility yellow provides extra safety in challenging light conditions and easy to recognise.

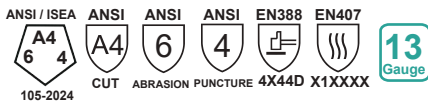


Liner: 13 gauge, UHMWPE, steel fiber, glass fiber, others
Coating: Sandy nitrile

Size Range: S, M, L, XL, 2XL
Packed: 12 Dozen / Case

CUT PROTECTION

Available August 1, 2026



12-368

13 gauge cut level A4 glove with 3/4 flat nitrile + palm sandy nitrile coating, reinforced in the crotch. Flexible. Water & oil repellent.

- Water and oil repellent, cut protection level A4.
- Reinforcement greatly extends glove life to save your cost and provides extra protection in the weakest area.
- Sandy finish provides super grip in oily and dry working conditions.
- Flexible, comfortable and good fitting.
- Contact heat protection up to 100 °C according to EN407.

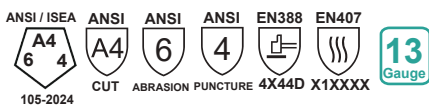
Liner: 13 gauge, UHMWPE, glass fiber, others

Size Range: S, M, L, XL, 2XL

Coating: Palm, sandy nitrile; 3/4, flat nitrile

Packed: 6 Dozen / Case

Available August 1, 2026



12-369

13 gauge cut level A4 glove with full flat nitrile + palm sandy nitrile coating. Water & oil repellent.

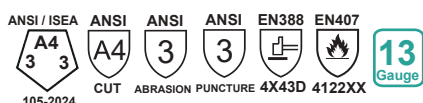
- Water and oil repellent, cut protection level A4.
- Sandy finish provides super grip in oily and dry working conditions.
- Great flexibility, comfort and good fit.
- Contact heat protection up to 100 °C according to EN407.

Liner: 13 gauge, UHMWPE, glass fiber, others

Size Range: S, M, L, XL, 2XL

Coating: Palm, sandy nitrile; Full, flat nitrile

Packed: 6 Dozen / Case



X-007

Superior 4 in 1 design glove, flame resistant, arc flash, cut and heat protection. Great flexibility, dexterity and comfort.

- Flame resistant, arc flash protection, cut level A4 and heat protection.
- Arc Rating (APTV) = 10.3 cal/cm2 as per ASTM F2675/ F2675M:2019. Class 2.
- Flame resistant level 4, contact heat, convective heat and radiant heat protection.
- Special coating formulation provides extra durability and great grip performance.
- Great flexibility and dexterity, minimizing hand fatigue.

Liner: 13 gauge, para-aramid, others

Size Range: S, M, L, XL, 2XL

Coating: Synthetic coating

Packed: 6 Dozen / Case

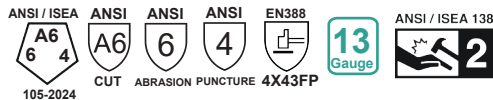
Available August 1, 2026



X-017

Impact, cut and contact heat protection glove, 13 gauge cut level A6, more durable double nitrile coating.

- Thicker and great TPR design provides great impact protection, high quality TPR pads are softer, more flexible and comfortable.
- Double nitrile coating offers great durability and puncture resistance, water and oil repellent. Sandy finish provides great grip performance.
- Reinforced in the thumb crotch to greatly extend the glove life and increase the abrasion resistance in the weakest area.
- The hook and loop design makes it easy to wear on and off and keeps the glove in position when wearing.



Liner: 13 gauge, UHMWPE, steel fiber, glass fiber, others

Coating: Sandy nitrile + flat nitrile

Size Range: S, M, L, XL, 2XL

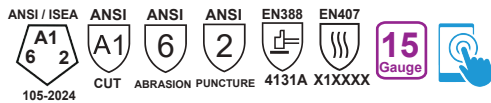
Packed: 6 Dozen / Case

MULTI-PURPOSE GLOVES

3000

Eco friendly, 15 gauge R-PET poliamide spandex glove with nitrile coating, flexible, soft and comfortable. Touch screen functionality.

- Eco-friendly, to protect our planet and workers. 1 pair equates about 2 bottles of 500ml reclaimed and recycled, taken out of landfill and about 36 gram CO₂ reduced vs using virgin polyester material.
- Super abrasion resistance with great flexibility, softness and comfort.
- Very good fitting and great dexterity.
- Sandy finish offers good grip in wet, oily and dry working conditions.
- 360° breathability to keep your hands cool.
- Contact heat protection up to 212 degrees Farenheit.
- Touch screen functionality.



Liner: 15 gauge recycling polyamide, spandex

Coating: Sandy nitrile

Size Range: XS, S, M, L, XL, 2XL

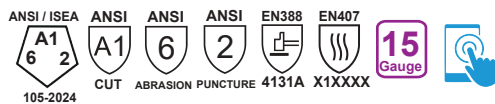
Packed: 12 Dozen / Case

Available July 1, 2026

3006

High quality 15 gauge glove with micro-foam nitrile coating, extra dots. Great grip and additional durability. Touch screen function.

- High quality nitrile dots contribute to excellent abrasion resistance, great grip and additional durability.
- Touch screen function enables you to use touch screen devices during work.
- Super flexible, soft and comfortable.
- High visibility orange color offers extra safe in dark condition or some outdoor works.
- Contact heat protection up to 212 degrees Farenheit.



Liner: 15 gauge, polyester, spandex, others

Coating: Micro-foam nitrile, nitrile dots

Size Range: S, M, L, XL, 2XL

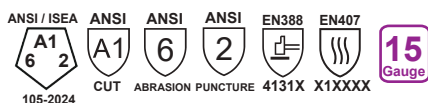
Packed: 12 Dozen / Case

Available July 1, 2026

3009

15 gauge polyester glove with full flat nitrile + palm sandy nitrile coating. Water & oil repellent, flexible and comfortable.

- Waterproof and oil proof.
- Contact heat protection up to 212 degrees Farenheit.
- Sandy finish offers good grip in wet, oily and dry working conditions.



Liner: 15 gauge, polyester

Coating: Palm, sandy nitrile; Full flat nitrile

Size Range: S, M, L, XL, 2XL

Packed: 12 Dozen / Case

12-251

High quality contact heat protection glove, up to 482 degrees F, very good fitting, soft and comfortable.

- Premium quality heat resistant glove which can withstand up to 482 °F (250 degree C) according to EN407.
- Thanks to the advanced knitting technology, it has a very good fitting and comfort even on a double layer glove.
- Soft and comfortable. Very flexible.
- High breathability to reduce hand perspiration.



Liner: 7 gauge, Kevlar, Nomex, cotton, others

Coating: No coating

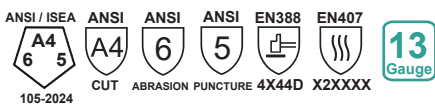
Size Range: S, M, L, XL, 2XL

Packed: 6 Dozen / Case

12-372

13 gauge cut level A4 glove with sandy nitrile coating, premium quality leather in the palm and fingers. Great heat and oil resistance, extra durability. Very soft and comfortable.

- Premium quality cut protection level A4 glove with great flexibility, dexterity, softness and comfort.
- Heat protection up to 482 °F (250 degrees C) according to EN407.
- Premium soft and comfortable leather in the palm offers great heat protection, extra durability and puncture resistance.
- The nitrile coating contributes to great oil resistance and extra heat protection.
- Good fitting.



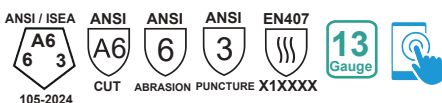
Liner: 13 gauge, UHMWPE mixed with others

Coating: Sandy nitrile, leather

Size Range: S, M, L, XL, 2XL

Packed: 6 Dozen / Case

new



X-022

Clear silicon coated 13 gauge cut level A6 glove, enhanced heat protection, excellent dry grip, smear free on glasses and other reflective surfaces, strong adhesion resistance.

- Cut protection level A6.
- XS Grip clear silicon coating offers enhanced contact heat protection which is ideal to work with hot materials up to 212 °F. Excellent grip performance on smooth materials, such as glasses, screens and parts, no finger marks and smudges left on the glasses and reflective surfaces.
- Strong adhesion resistance to prevent sealant and hot melt build up.
- High visibility color for easier recognition.
- Washable for longer service life to save cost.
- Ideal for glass handling, metal handling, hot melt and sealant works, automotive manufacturing and many others.

Liner: 13 gauge, UHMWPE, steel fiber, glass fiber, others

Coating: Clear silicon

Size Range: S, M, L, XL, 2XL

Packed: 6 Dozen / Case

SLEEVES

30-745

New special design 13 gauge cut level A6 sleeve, velcro design, soft and comfortable. Better fit.

- 13 gauge cut protection level A6.
- Special design in the upper arm together with hook and loop makes it better fit the arm (no matter strong arm or slim arm), more comfortable and holds the sleeve in position when wearing. Two sizes' options.
- Extra band design can hold the sleeve in position in the bottom and also more comfortable.
- Advanced yarns wrapping and knitting technology provides super cut protection but also great wearing comfort and softness.
- Washable for a longer service life to save cost.



Liner: 13 gauge, UHMWPE, steel fiber, others

Length: 18"

Size Range: M, L

Packed: 6 Dozen / Case

Available July 1, 2026

30-920

PremiCut technology™, ultra thin 18 gauge cut level A6 sleeves, special design, with super fit, softness and comfort. High visibility.

- Engineered with PremiCut technology, 18 gauge cut protection level A6, ultra thin, very soft and comfortable.
- Special design in the upper arm together with hook and loop makes it super fit the arm (no matter strong arm or slim arm), very comfortable and also holds the sleeve in position when wearing. Two sizes' options.
- Premium fabric design in the palm can hold the sleeve in position in the bottom and also very comfortable when wearing together with a glove.
- High visibility yellow provides extra safety in challenging light conditions and easy to recognise.
- Washable for a longer service life to save cost.



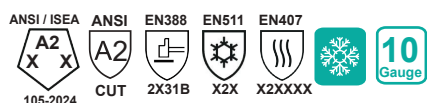
Liner: 18 gauge, PremiCut

Length: 18" and 22"

Size Range: M, L

Packed: 6 Dozen / Case

Available October 1, 2026



51-500

Cold & heat resistance, high quality 10 gauge brushed acrylic glove with sandy latex coating. Very soft and comfortable.

- Great cold and heat resistance.
- Super softness, flexibility, comfort and fitting.
- Sandy latex coating contributes a better grip performance.
- High visibility orange color is also good for outdoor works or dark situation.

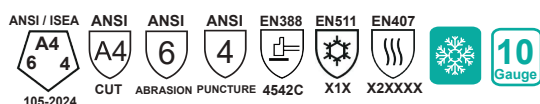
Liner: 10 gauge, brushed acrylic

Coating: Sandy latex

Size Range: S, M, L, XL, 2XL

Packed: 10 Dozen / Case

Available October 1, 2026



51-818 PRO

Cold & heat resistance, cut level A4, high quality 10 gauge brushed acrylic glove with sandy nitrile coating. More durable.

- Great cold and heat resistance.
- Cut protection level A4.
- 10 gauge brushed acrylic cut resistant liner guarantees excellent cold resistance and provides extra comfort & softness compared with the standard 7 gauge one in the market.
- The nitrile coating makes it more durable (2+ times abrasion resistance) and also better for oily work.
- Super softness, flexibility and comfort.

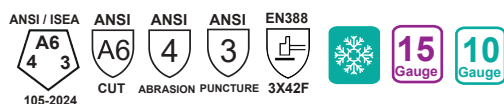
Liner: 10 gauge, brushed acrylic, UHMWPE, others

Coating: Sandy nitrile

Size Range: S, M, L, XL, 2XL

Packed: 10 Dozen / Case

Available October 1, 2026



51-807

Excellent cold resistance, waterproof & windproof, super soft and very flexible. Cut level A6.

- Excellent cold resistance, waterproof and windproof.
- Great 360° cut protection at level A6.
- Sandy finish offers good grip in wet, oily and dry working conditions.
- Very soft, flexible and comfortable, great fitting.

Liner: 15gg+10gg, UHMWPE, steel fiber, brushed acrylic, others

Coating: Palm, sandy latex; Full, flat latex

Size Range: S, M, L, XL, 2XL

Packed: 10 Dozen / Case

Labels of Protective Gloves

ANSI / ISEA 105-2024



American national standard for protective gloves and sleeves against mechanical hazards

ANSI



CUT

ANSI cut protection, levels from A1 to A9.

ANSI



ABRASION

ANSI abrasion protection, levels from 1 to 6.

ANSI



PUNCTURE

ANSI puncture protection, levels from 1 to 5.

ANSI / ISEA 138



ANSI standard for protective gloves against impact hazards



EN 388:2016 + A1:2018

Protective gloves against mechanical hazards



EN 407:2020

Protective gloves against thermal risks (heat and/or fire).



EN407:2020

Protective gloves against thermal risks (heat and/or fire). No flame protection.



EN511:2006

Protective gloves against cold



EN16350:2014

Protective gloves against electrostatic properties.



Suitable for food contact and handling



Gloves made from recycled R-PET bottles



ESD Anti-static



Chemicals hazards



Cold hazards



Touch screen compatible



The gauge reflects the thickness of the glove, the bigger gauge the thinner. For example, 18 gauge glove is thinner than 15 gauge one.

ANSI / ISEA 105-2024



NOTE: If an "X" is shown on one or multiple of the points in the pictogram, the glove has not been tested to that specific ANSI/ISEA 105-2024 classification(s)

ANSI / ISEA 105-2024 is an American national standard for protective gloves and sleeves against mechanical hazards.

CUT RESISTANCE

ASTM F2992 - 15: Use a TDM (tomodynamometer) cutting tester to move a straight - edged blade 20 millimeters along a unidirectional path on the material until it penetrates. Cut the material 5 times under 3 different loads (using a new blade each time). Then determine the cut level of the material. The force applied to the material by the rotating blade is recorded in newtons to establish this AF scale, and then the cut resistance level is determined.

ANSI / ISEA 105 Cut Levels and Scores	A1	A2	A3	A4	A5	A6	A7	A8	A9
Straight - Blade Cutting (g)	≥200	≥500	≥1000	≥1500	≥2200	≥3000	≥4000	≥5000	≥6000

LIGHT/MEDIUM CUT HAZARDS

MEDIUM/HEAVY CUT HAZARDS

HEAVY/HIGH CUT HAZARDS

ABRASION RESISTANCE

Based on ASTM D3389 - 10 (coated/unlined gloves) and ASTM D3884 - 09 (uncoated gloves), determine abrasion resistance by testing cycle counts. Mount a 4 - inch circular sample on a horizontal platform, apply 500g/1000g vertical load, use two calibrated H - 18 wheels with carborundum & silicon carbide abrasives for wear testing.

	500 Gram Load			1000 Gram Load		
ANSI / ISEA 105 Abrasion Levels and Scores	1	2	3	4	5	6
Abrasion Test (Revolutions)	≥200	≥500	≥1000	≥3000	≥10000	≥20000

PUNCTURE RESISTANCE

Test the maximum force for a blunt probe (similar to a ballpoint pen) to pierce samples between two plates. The probe pierces test fabric at 90° at 100mm/min, with weight gradually increased to puncture glove material.

ANSI / ISEA 105 Puncture Levels and Scores	1	2	3	4	5
Blunt Object Puncture Test (Newton)	≥10	≥20	≥60	≥100	≥150

ANSI / ISEA 138



ANSI / ISEA 138-2019 is a American national standard for the performance and classification of impact resistant gloves. Use a 2.5 - kg weight to impact the test glove with 5 J of energy. Test each glove's fingers 10 times and knuckles 8 times (both hands), totaling 18 impacts. A dynamometer connected to the anvil records the force transmitted through the glove back, in kN.

ANSI / ISEA 138 - 2019	ANSI/ISEA 138-2019 1	ANSI/ISEA 138-2019 2	ANSI/ISEA 138-2019 3
Average Transmitted Force	≤ 9 kN	≤ 6.5 kN	≤ 4 kN

The less force transmitted through the glove the stronger the protection. Level 3 offers you the most protection. Level 1 offers the least protection.

EUROPEAN STANDARDS

EN388



X X X X X X

The gloves are labelled with a pictogram and the performance levels. The performance levels are defined by four numbers and two letters.

These markings refer to the following parameters:

- * Abrasion resistance (0-4)
- * Cut resistance (0-5)
- * Tear propagation force (0-4)
- * Puncture resistance (0-4)
- * Cut resistance according to EN ISO 13997 (A-F)
- * When testing for protection against impact, the letter 'P' is also specified.

The following example illustrates the labelling using graphic symbols and power levels:

EN388



4 X 4 3 F P

- Protection against impact, 'P' = Pass, 'F' = Fail, no letter = not applicable
- Cut resistance according to EN ISO 13997 (level A-F)
- Puncture resistance (level 0-4)
- Tear propagation force (level 0-4)
- Cut resistance (level 0-5)
- Abrasion resistance (level 0-4)



X X X X X X



X X X X X X

Performance levels

The pictogram is followed by six numbers that represent the results of the test for defined loads in performance levels. They stand for:

- * limited flame resistant (0-4)
- * contact heat (0-4)
- * convective heat (0-4)
- * radiant heat (0-4)
- * small splashes of molten metal (0-4)
- * large quantities of molten metal (0-4)

The higher the numerical value, the better the test result.

If a performance level (at least 1) is achieved for limited flame training, the following pictogram is provided:



If no performance level for limited flame training is specified (non-flame-resistant protective gloves), the following pictogram must be used instead:



This means that only one of the two pictograms may appear on a product at any one time.

Below you will find two examples of the labelling of protective gloves against thermal hazards

EN407



4 1 4 3 2 1

EN407



X 1 4 3 2 1

- Large quantities of molten metal (0-4)
- Small splashes of molten metal (0-4)
- Radiant heat (0-4)
- Convective heat (0-4)
- Contact heat (0-4)
- Limited flame resistant (0-4)

EN511



X X X

The pictogram is followed by three numbers that represent the results of the test for defined loads in performance levels. They stand for:

- * convective cold (0-4)
- * contact cold (0-4)
- * water proof (0-1)

Below you will find an example of labelling with an explanation of the performance levels:

EN511



1 2 1

- '1' = waterproof ('0' = not waterproof)
- contact cold level 2
- convective cold level 1

NOTES

[illegible]

Xcellent®

Xcellent Safety GmbH

Am Seestern 4,
D-40547 Duesseldorf,
Germany

Phone: +49 176 5888 6781
Email: info@xcellent-safety.eu
Web: www.xcellent-safety.eu

Xcellent USA Inc.

245 Orbit Road,
Statesville, NC 28677,
United States

Customer Service: +1 800 297 1120
Email: info@xcellent-safety.com
Web: www.xcellent-safety.com



Xcellent-Safety.com