





Cut resistance is at the heart of what we do, so we can protect everything you do.

Tilsatec is a UK manufacturer with a long history in developing technical yarns and materials for PPE. Specialising in cut resistant hand, arm and body protection we are able to engineer high levels of performance and mechanical protection into all our products. Working closely in partnership with customers, we design and develop solutions from the ground up to ensure they are receiving maximum performance/cost efficiencies. For businesses who want expertise they can rely on to keep their people safe, Tilsatec deliver high performance hand, arm and body protection solutions. We manufacture our own proprietary cut resistant yarn - the primary source of mechanical protection, on site in the UK. This means we can deliver maximum performance in every fibre of what we do. Because when our gloves perform at their best, your people can perform at their best.

Selecting the right protective solution for your needs is vital, but can sometimes seem a complex exercise. Our representatives are able to guide you through the entire process, this typically includes conducting a comprehensive hand protection site survey to understand the hazards and requirements involved. They can then make clear and simple recommendations as to the type and style of PPE you need. Following successful trials, they can also assist with on site training and inductions to ensure workers are wearing and using their PPE correctly from the outset, ensuring they go home safely at the end of the day.



We've built a reputation as innovative cut resistance specialists, with a comprehensive range of cut resistant hand, arm and body protective products for use in a variety of industrial sectors.

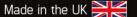
Wherever people work in high hazard environments, wherever there are cut and puncture hazards, sharps or needles, our products are at the front line, helping them do their jobs safely and efficiently.

Whenever you see the Rhino Yarn⁶ mark it means a product has been made using our own proprietary yarn technology - the primary source of mechanical protection, on site in the UK. With this comes the assurance of full quality control, processing traceability and performance efficiencies built in at every level.

We're incredibly proud to be a UK manufacturer, maintaining generations of expertise in yarn production and design. Determined to stay in complete control we've also created our own purpose-built independent Research and Development laboratory. Having a facility like this on site equips us to be ready for the future.

Find out more:











Independent Accreditation

Tilsatec's laboratory is independently accredited by UKAS. The United Kingdom Accreditation Service (UKAS) is the sole accreditation body recognised by Government to assess, against international standards, organisations that provide testing services. This accreditation uses the standard ISO 17025 to assess a laboratory's ability to produce high quality, accurate tests and data. The laboratory also supports the following functions:





Compliance monitoring and compilation of CE and UKCA certificate applications



Supporting of new product development



Bespoke in house testing to suit customer's specific hazards/requirements



Performance and quality control testing of raw materials, yarns and finished products



Ongoing due diligence product testing



Benchmark testing to ensure test results are in line with industry standards

For a list of accredited testing carried out by the lab vist: https://www.ukas.com/wp-content/uploads/schedule_uploads/00002/10386Testing-Single.pdf

If we believe a current EN standard doesn't go far enough in providing customers with the performance data they need, we will develop unique in house test methods which go beyond the standard to give more realistic data, representative of real life working conditions and hazards



Technical support and product guidance

Alongside our experienced sales representatives, the technical team can provide additional advice and support on the suitability of a product and make recommendations on factors such as cut resistance, grip performance, abrasion, liquid repellency, thermal properties and breathability. Where a customer may have concerns as to the suitability of a product for their particular application, the laboratory team can assist in evaluating the nature of the tasks being performed and provide a detailed evaluation.

Tilsatec has a Quality Management System in place which is certified to ISO 9001. The standard is based on a number of quality management principles including a strong customer focus, the motivation and implication of top management, the process approach and continual improvement. This demonstrates the existence of an effective quality management system that satisfies the rigours of an independent, external audit.



Certificate Number 14054

7

EN388:2016+A1:2018 Blade Cut Resistance

The laboratory uses a TDM-100 machine to conduct cut resistance testing to the EN ISO 13997:1999 and ASTM F2992-15 standards. This allows the testing of high performance material with cutting forces in excess of 100 newtons, which is necessary to achieve the highest accuracy in results. The level of the force achieved gives end users an idea of the resistance the glove will offer against cutting hazards. The test method uses a straight edge blade drawn across the sample in one direction where the blade is replaced after each cut has been performed. A range of loads are used throughout the test and the cutting distance against the force used (in Newtons) is plotted to determine the force required to cut through the material in a 20mm blade stroke.



EN388:2016+A1:2018 Abrasion Resistance Testing

A Martindale Abrasion tester is the internationally accepted equipment for testing abrasion and wearing of fabrics. Tilsatec uses the M235 machine, which is the latest model, ensuring accurate and consistent results are achieved. High performance materials can be tested to in excess of 8000 cycles where required, to determined when degradation of the material has occurred. Abrasion is determined by analysis of the specimen after a number of rubs defined by the performance level. Failure is observed once complete breakthrough of the sample is reached.



EN388:2016+A1:2018 Tear and Puncture Resistance

At Tilsatec, a tensometer fitted with a high capacity load cell is used to determine the force required to tear a rectangular specimen apart. A rounded stylus fitted into the tensometer is penetrated through a sample to determine the material's puncture force.

ASTM F2878-19 Hypodermic Needle Puncture Resistance

High-Performance hypodermic needle puncture resistant materials are tested on the tensometer with single use validated 28, 25 and 21 gauge needles. This test ensures that the materials offer adequate protection against hypodermic needle hazards where required.

EN ISO 21420:2020 General Requirements

The laboratory carries out the general requirements laid out in the recently updated EN ISO 21420:2020 standard. These include sizing and dexterity to guarantee the highest standard of fit and comfort and pH testing to ensure the end user will be safeguarded against any irritation that may be caused by the materials.

Other Tests

Tilsatec has the expertise to develop test methods that can give indicative data and information on protection against contact heat, friction testing to determine gripping properties and food migration to ensure gloves that carry the food safe pictogram comply with the current EU regulations.

Impact Testing

This is a new addition to the EN388: 2016+A1:2018 standard and is an optional test. It should only be included for gloves that claim specific impact resistant properties. The new impact test is based on the EN13594:2015 standard for protective gloves for motorcycle riders. The knuckle area is tested by dropping a striker with impact energy of 5J onto the test subject. To be considered a pass (P), the transmitted force needs to be less than or equal to 7 kN with no single results greater than 9 kN. Only the knuckle area is tested.



PPE REGULATION (EU) 2016/425

Regulation (EU) 2016/425 on personal protective equipment (PPE) has now replaced the previous Directive (89/686/EEC). The regulation details the requirements for all PPE placed on the market in the European Economic Area (EEA) to comply with the legislation. All Tilsatec PPE products have undergone examination to conform with the EU regulations and are CE marked.

Category I: Simple PPE

Gloves and sleeves designed to protect against minimal risks such as superficial mechanical injury and cleaning. Manufacturers are permitted to test and self certify products.

Category II: Intermediate PPE

Hand and arm protection designed to protect against cuts, abrasion, puncture and tearing. This category of products must undergo independent testing and attain certification by an accredited notified body. A CE mark will then be issued by the notified body. No item of PPE can be sold or used in the EU without being issued a CE mark. The name and address of the notified body that issued the CE mark must be present on the Instructions for Use supplied with the product. Ongoing surveillance of performance must be carried out through testing.

Category III: Complex PPE

PPE in this category includes risks that may cause very serious consequences such as death or irreversible damage to health e.g. chemicals, harmful biological agents, extreme temperatures and cuts by hand-held chainsaws. PPE must undergo independent testing and certification the same as Category II products. The quality assurance system used by the manufacturer must also be independently checked and the identification number of the notified body should appear alongside the CE mark on the Instructions for Use. Ongoing surveillance of performance and manufacturing processes must be carried out through product testing and conducting factory audits.

PPE REGULATION (EU) 2016/425 as brought into UK Law and amended

In response to the United Kingdom leaving the European Union, a new legislation for placing PPE products onto the GB market has been introduced. PPE products that are intended to be sold in Great Britain (England, Scotland and Wales) must be certified under the new UKCA marking that came into force on 1 January 2021. After 31 December 2022, CE marking will not be accepted any further for products sold in the UK hence the requirement for the UKCA mark.

UKCA certification is similar to the CE process as explained above, with UKCA requiring an "approved body" to carry out assessments for Category II and III PPE products rather than a "notified body". Both the CE and UKCA marks shall be affixed to PPE products that are intended for sale within the EU (27 member states) and UK. All Tilsatec products have undergone examination under the PPE Regulations as brought into UK Law and are UKCA marked.

EN STANDARDS EXPLAINED

EN 388:2016+A1:2018 - Mechanical Protection

Abrasion Resistance (1-4) Updated in 2016

The Martindale Abrasion tester is used to determine the durability, wearing and abrasion of materials. The test is performed by rubbing circular specimens taken from the palm of the glove against a specified abradant. The sample holder moves in a Lissajous pattern under a 9KPa load and the test is checked at 100, 500, 2000 and 8000 cycle intervals for any signs of abrasion. Failure is confirmed once complete breakthrough of the sample is observed. Four samples are tested and the final performance level is based on the cycles at which any of the four specimen show signs of breakthrough.

The update to the EN388 standard included a change to the abradant used for this test. Only the specified type of abradant shall be used to determine the abrasion resistance.

X = Not tested

Coupe Blade Cut Test (1-5)

Previously, the BS EN 388:2003 classification for cut resistance relied on results obtained from carrying out the coupe test. This test uses a circular blade under a 5N load, which moves in a backward and forward motion over the specimen until the blade cuts through. A "cutting index" is calculated and the level 1-5 is assigned.

EN ISO 21420:2020 -

General requirements for protective gloves

Defines the general requirements for most types of protective gloves which includes:

- · Glove design and construction
- Sizing and measurement of gloves
- Cleaning
- · Dexterity
- Innocuousness
- Product marking, packaging and information supplied by the manufacturer
- · Breathability and comfort
- · Electrostatic properties

Sizing of gloves according to hand length and circumference:

Glove Size	Hand Circumference (mm)	Hand Length (mm)
4	101	<160
5	127	<160
6	152	160
7	178	171
8	203	182
9	229	192
10	254	204
11	279	215
12	304	>215
13	329	>215

EN388:2016+A1:2018



Tear Resistance

[1-4]

A tensometer is used to determine the strength required to tear a sample apart. Four rectangular samples are tested from the palm of 4 separate gloves where two specimens with a 50mm slit in the longitudinal direction are taken across the palm, and two specimens are taken along the length of the glove. The samples are clamped in the tensometer which pulls the samples until they are fully torn apart at a speed of 100mm/min. The force at peak is recorded for each specimen tested. The minimum value achieved from all four test results is used to determine the final tear resistance level that ranges from 1 to 4.

Puncture Resistance (1-4) Updated in 2016

A large 4mm wide probe with rounded stylus is pushed using a tensometer fitted with a compression load cell 50mm through the material taken from the palm of the glove at a speed of 100mm/min. Four specimens are tested and the force at peak is recorded. The minimum value achieved from all four test results is used to determine the final puncture level that ranges from 1 to 4.

Impact P (passed) F (failed)

This test is new to the EN388: 2016 standard and is optional. It should only be included for gloves that claim specific impact resistant properties. The new impact test is based on the EN13594:2015 standard for protective gloves for motorcycle riders. Only the knuckle area is tested and will achieve a Pass or Fail.

EN ISO 13997 Cut Resistance (A-F) New to the standard in 2016

The EN ISO 13997 cut resistance method is one of the recent additions to the EN 388 standard. This test was introduced to accommodate higher cut resistance materials in the market that have a blunting effect on blades and other sharp objects. This method uses a TDM test device, fitted with a single use straight edge blade that is drawn once across the material in one direction. Once the blade cuts through the sample, the distance that the blade has travelled is recorded.

A range of force in newtons are used throughout the test and a graphical representation of force against cutting distance is used to determine the force required to cut through the material at 20mm of blade travel. By using the blade only once and testing a variety of load forces (as opposed to the 5N standard load used in the coupe test), the impact of blade blunting is eliminated and a more accurate representation of cut protection is assigned.

Finding the glove for your industry requirements



2 - 5 NEWTONS

- Light material handling
- Small parts assembly
- Light duty general purpose



10 - 15 NEWTONS

- Metal handling
- Light assembly
- Maintenance works

E 22 - 30 NEWTONS

- Metal stamping Glass manufacturing
- Automotive assembly
- Food processing Aerospace
- CNC Machining/Metal Fabrication

3 - 10 NEWTONS

- Packaging
- White goods manufacturing
- Warehousing/Logistics

D 1

15 - 22 NEWTONS

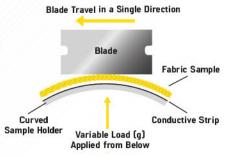
- Electrical installation Automotive assembly
- Engineering Utilities Aerospace
- CNC Machining/Metal Fabrication

F :

30 NEWTONS +

- Heavy metal stamping
- Waste management
- Recycling
- Glass handling

TDM test process used for the ISO 13997 standard



This pictogram indicates that the user should always consult the instructions for use:



EN407: 2020 - Protection from Thermal Hazards



XIXXXX

Products certified to the new EN407:2020 standard shall be affixed with this pictogram. The pictogram accompanying EN407:2020 includes 6 numbers which represent performance levels against the specific thermal tests as per the table below.

Only if a product has been tested to "Limited Flame Spread" achieving a min performance level of 1 then the pictogram depicting the flame shall be used.



abcdef

Performa	ance Level	1	2	3	4
a. Limited Flame Spread	After flame time	< 15 s	< 10 s	<3s	< 2 s
a. Limited Flame Spread	After glow time	no requir.	< 120 s	< 25 s	<5s
b. Contact Heat	Contact temperature	100°c	250°c	350°c	500°c
b. Contact Heat	Threshold time	> 15 s	> 15 s	> 15 s	> 15 s
c. Convective heat (heat transfer delay)		> 4 s	>7s	> 10 s	> 18 s
d. Radiant heat (h	eat transfer delay)	>7s	> 20 s	> 50 s	> 95 s
e. Small drops mol	ten metal (# drops)	> 10	> 15	> 25	> 35
f. Large quantity n	nolten metal (mass)	30g	60g	120g	200g

a. Limited Flame Spread

The glove is placed vertically over a burner and is tested for ignition times 3 and 15 seconds. Classification is based on the length of time the material continues to burn and glow after the source of ignition is removed.

b. Contact Heat

The test sample is placed on a calorimeter and a heated cylinder is brought into contact with the specimen. Temperatures of 100, 250, 350 and 500°c are tested to determine the classification. The threshold time shall be calculated, where an increase in calorimeter temperature of 10°c is observed once the heated cylinder is in contact with the sample. A threshold time of greater than 15 seconds demonstrates a pass for the test temperature. If a level 3 contact heat is achieved, then limited flame spread must also be tested and pass level 1.

c. Convective Heat Resistance

The glove is placed in a controlled chamber and exposed to a flame. The resistance is based on the length of time it takes to transfer the heat from the flame. This rating can only be used if a level 3 or 4 is achieved in the limited flame spread test.

d. Radiant Heat Resistance

The glove is exposed to radiant heat and the classification is determined by how long it takes for the transfer of heat from the radiant heat source. The back of the hand is tested. This rating can only be used if a level 3 or 4 is achieved in the limited flame spread test.

e. Resistance to Small Splashes of Molten Metal

The glove is splashed with molten metal and the number of molten metal drops that are required to heat the glove to the required temperature are measured. The classification is based on the average of the number of droplets counted on four samples. Specimen are taken from the palm and the back of the glove. This rating can only be used if a level 3 or 4 is achieved in the limited flame spread test.

f. Resistance to Large Splashes of Molten Metal

The glove is lined with a skin simulated material and molten metal is poured over the glove. Once the test is complete, the liner material is assessed for any changes such as pin holing or degradation and the classification is based on the weight of molten metal required to cause the changes to the skin simulated material. If a drop of the molten metal is stuck to the glove or if the sample ignites, the material fails the test.



ASTM F2878-19 -

Needlestick Resistance

A tensometer is used to drive a single use hypodermic needle through the sample. Needles are validated for sharpness before use and shall be either 28, 25 or 21 gauge thickness. 12 samples are tested for force at peak, and the average force is calculated to assign the performance level according to ANSI/ISEA 105-16 for hypodermic needle puncture resistance.



EN1149 - Antistatic

EN 1149-5: 2008 is a European Standard which specifies the performance and design requirements for electrostatic dissipative clothing, used as part of an earthed clothing system to avoid the build up of static charges.

There are a number of important applications where the use of antistatic hand protection is of critical importance, such as:

- To prevent charge build up and release in flammable atmospheric environments where there is a risk of incendiary discharge
- To avoid damage to sensitive electronic componentry during assembly processes
- To control the attraction of dust and other contaminants to critical prepainted surfaces

EC Food Regulations

Tilsatec food range products are approved for contact with all foodstuffs in compliance with the parent directive 1935/2004/EC. They also comply with the specific requirements laid down in the Commission Regulation (EU) No 10/2011 plastic materials and articles intended to come into contact with food.

The regulation governs the substances that may be used in the manufacture of food contact materials (including gloves for food handling) and specify that under normal foreseeable conditions of use, they do not transfer their constituents to food in quantities which could:

- · endanger human health; or
- · bring about an unacceptable change in the composition of the food; or
- · bring about a deterioration in the organoleptic characteristics (i.e texture, taste, aroma)

To ensure food contact materials comply with these regulations a series of test standards are applied (EN 1186) to determine migration levels from contact materials into the food using a variety of food simulants.

Compliance with the allowable limits enables food gloves to be marked with the following 'food safe' pictogram:

Tilsatec food approved products have been tested according to these standards and meet the total extractive and overall migration limits required for repeat use application.

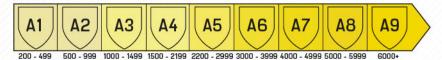
ANSI/ISEA 105-2016 Cut Resistance

ANSI/ISEA 105-2016 specifies the use of standard ASTM F2992M-15 as the exclusive method for determining the load (in grams) required to assign a cut resistance rating. ANSI/ISEA 105-2016 also defines the use of the TDM only and has eliminated the use of the CPP test device. The move to a single machine is to reduce confusion over the test method and improve reliability and consistency of results achieved. Further changes include a higher number of tests required to report mean values, some procedural differences in blade calibration and statistical analysis of data.

A new 9 level rating scale has been established (A1-A9) compared with the 5 levels defined in ANSI/ISEA 105-2011. This new standard now addresses higher cut resistant materials and additionally gives a more accurate, better aligned and consistent test method between the ANSI/ISEA and EU standard for cut resistance. Classification levels have also been increased with lower ranges between classes to allow for more accurate identification of the PPE required for high hazard use.

In 2016 significant updates were made to EN 388 and ANSI/ISEA 105 standards to provide a more accurate and reliable assignment of cut levels for hand protection. The changes were also designed to increase harmonisation between EN/ANSI test methods and classification levels to provide a clearer basis for comparison of product performance in a global market.

TDM Only Grams to cut



Differences between ANSI and EN Cut tests

Whilst the technique is very similar and both standards use the TDM cut testing machine, there are slight differences between the methods. These include, the specification for blade sharpness, cutting load is measured in grams for ANSI and newtons for the EN standard, levels range from A1 – A9 for ANSI and A - F for the EN standard and lastly, the ANSI test requires the test to be carried out in triplicate and the average load for the 3 tests is taken as the final value, whilst the EN test is carried out once.

GLOBAL GLOVE MARKINGS

It is important to familiarise yourself with how product information, relevant standards and product codes are laid out on our products.

Some may be marked on the back of the hand as shown below and some with a label sewn on the inside.

Always check labelling before using your item of PPE to ensure it meets the standards required for your task.



INDUSTRIES

Across many industrial sectors there are jobs that involve cut and puncture hazards, sharps and needles Through working with end users and learning about these hazards, we can design optimised solutions for protection, value and user acceptance. At Tilsatec we understand that each industrial sector will have a wide variety of performance attributes required from their hand and arm protection.



Aerospace

It is crucial for workers in the aerospace industry using cut resistant hand protection to have close fitting, dexterous gloves with high levels of tactility to be able to carry out fine, precision work. Any coatings applied to the gloves need to provide secure grip without loss of dexterity.



Automotive

Manufacturing and assembly in the automotive and transportation industries present a wide range of cut and puncture hazards. Be it body weld, metal stamping or general handling, Tilsatec have developed products designed specifically for each of these areas.



Construction

Construction encompasses many areas including masonry, dry walling, timber work, cementing and general handling of materials amongst others. Tilsatec offer gloves to suit a number of these tasks from general purpose gloves to highly cut resistant leather and coated gloves.



EV Manufacturing

One of the fastest growing, the EV industry needs to protect users and parts from electrical currents and/or discharges. We offer electrostatic discharge products for electronics protection and electrical insulating gloves for low to high voltage applications.



Food

Our cut resistant food gloves have been developed specifically for the food industry. Fully launderable without diminishing the antimicrobial properties, the range is available in a choice of weights and styles suitable for use with beef, pork, poultry and vegetable processing applications.



Glass

Workers in the glass industry need hand and arm protection that provides a high level of cut resistance which also provides good grip and safe handling to prevent product damage. We understand these requirements and have solutions for many areas of manufacture.



Intricate Assembly

Assembling small parts or products requires ultra-high dexterity and tactility which is essential in determining product selection Tilsatec have a wide range 15 and 18 gauge products with thin durable coatings to aid users in the intricate work required in these applications, without compromising protection.



Maintenance

Maintenance and repairs of factories, machinery and equipment is required in various applications to prolong their life. Tilsatec offer a range of products with superior grip, oil resistance, dexterity, durability and cut resistance.

TECHNOLOGIES \ FEATURES



































Manufacturing

A broad category, manufacturing includes the assembly and manufacture of house hold appliances/white goods and any assembling of parts/ components where there may be potential sharp/cut hazards.



Metal Fabrication

Safety is key in the metal manufacturing and fabrication industry. Worker's hands are exposed to a number of hazards requiring cut resistance, puncture resistance, liquid protection and heat protection.



Oil & Gas

Oil & Gas is a huge industry with many varied sectors, each with their own specific hand and arm protection needs. We have developed a small, specially designed range of gloves to provide high cut resistance, heat and FR protection, impact and liquid protection.



Petrochemical

With similar hand protection requirements to the oil & gas industry. workers involved in the production of petrochemicals particularly down stream require category III hand protection for high hazard environments.



Power Transmission

The industry has a risk of death from electrocution if the incorrect PPE is worn. Tilsatec can provide a range of Electrical Insulated Gloves to help protect workers from these risks from Class 00 (500v AC) up to Class 4 (36 000v AC).



Telecoms

Technicians and engineers are often in hazardous situations working overhead. underground and in enclosed spaces. Tilsatec products provide grip when ascending/descending towers, assist with handling small parts and protect users from electrocution and cut injuries.



Utilities

The Utilities sector can provide unique environments where high levels of protection are required, but with the greatest amount of dexterity and sensitivity to carry out sometimes delicate handling operations, be it handling blades, cables or pulling lines.



Waste

Waste management and waste disposal is one of the fastest growing industrial sectors. It presents many cut and puncture hazards inclding needlestick hazards. Typical operations include waste collection and removal, recycling, sorting and landfill management.

GUIDE TO GLOVE COATINGS AND FINISHES

In finding the correct hand protection for your industry and application, it's likely you'll encounter various different glove coatings from flat and foam nitrile to PU and latex, so it's important to understand how they differ and which coating type is right for your application.



POLYURETHANE (PU)

- · High Abrasion
- · Robust/Durable
- · High Tactility
- · Dry Grip

CRINKLE LATEX

- · Improved Wet Grip (exc. oil)
- · Good dry grip
- · Liquid repellent
- · Increased Comfort



CLEAN PU

- · High tactility
- · Increased comfort
- · Environmentally friendly
- · Water-based
- · Dry Grip

BI-POLYMER

- · Robust/Durable
- Liquid repellent
- · Improved wet & oil grip
- Additional back of hand abrasion resistant

FOAM NITRILE

- Increased comfort (less irritation than PU)
- Breathable
- · Good wet and dry grip
- · Good dexterity

SANDY NITRILE

- · Improved wet and dry grip
- · Robust / Durable
- Good dexterity



MICROFOAM NITRILE

- · High abrasion resistantance
- · Ultimate comfort
- · Breathable
- · High tactility
- · High dexterity

SMOOTH LATEX

- · Electrical Insulating
- · Dry grip
- · Easy donning and doffing



HAND PROTECTION **EVALUATION PROCESS**

When it comes to identifying and specifying the right hand protection for your work force, it can seem overwhelming looking at the number of protective gloves now in the market place. Our Hand Protection Evaluation Process is clear, tried and tested, designed to guide you every step of the way and support you beyond your initial selection stage.

With their specialist expertise in high level cut resistance our sales team can provide you with the following support and assistance:

- Conduct a site survey to assess all handling hazards and requirements
- · Provide an end user report with product recommendations for every department
- · Set up on site trialling and sampling to ensure gloves are tested thoroughly
- · Monitor and assess glove trials
- · Deliver product training to staff and distributors
- · Provide educational infographics and posters to encourage best practice in hand protection

Carry out ongoing sales support and site visits



Introduction to Tilsatec and site survey to identify hazards



Phase 2

Product trials, modifications and re-trials



of hand injuries are caused by wearing the wrong hand protection



Phase 3

Customer reports and product recommendations

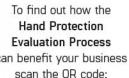


Phase 4

Product implementation. ongoing monitoring and support

> To find out how the Hand Protection **Evaluation Process** can benefit your business







Electrical Insulating Gloves

Providing protection for low voltage and high voltage applications the range includes the following options:

LOW Voltage

- Pulse™ Class 00 Electrical Insulating Gloves maximum use voltage 500V ac / 750V dc, 28cm and 36cm in red or yellow
- Pulse™ Class 0 Electrical Insulating Gloves maximum use voltage 1000V ac / 1500V dc, 28cm and 36cm in red or yellow

HIGH Voltage

- Pulse™ Class 1 Electrical Insulating Gloves maximum use voltage 7,500V ac / 11,250V dc, 36cm in red/black
- Pulse™ Class 2 Electrical Insulating Gloves maximum use voltage 17,000V ac / 25,500V dc, 36cm in red/black
- Pulse™ Class 3 Electrical Insulating Gloves maximum use voltage 26,500V ac / 39,750V dc, 36cm in red/black
- Pulse™ Class 4 Electrical Insulating Gloves maximum use voltage 36,000 ac / 54,000V dc, 41cm in red/black

24-9010/20 / 24-9012/22

Class 00

11"/28cm, 14"/36cm Red 11"/28cm, 14"/36cm Yellow

	24-9010	24-9012	24-9020	24-9022
Category	A/C	A/C	A/C	A/C
Class	00	00	00	00
Cuff	Straight with b	eaded edge	Straight with be	aded edge
Max Use	500V	500V	500V	500V
Туре	1	1	1	1
Colour	Red	Yellow	Red	Yellow
Length	11" / 28cm	11" / 28cm	14" / 36cm	14" / 36cm
Sizes	8-11	8-11	8-11	8-11
Packaging	1 pair p/polyba	g and individual b	ox. 10 pairs p/cart	on







*TILSATEC







Meets the special properties:

A - Acid

C - Extreme low temperature

H - Oil resistant

Z - Ozone

R = A + Z + H

CLASS		IGTH INCH	CATEGORIES	PROOF TEST VOLTAGE AC/DC	MAXIMUM USE VOLTAGE AC/DC	SIZES
Class OO Beige	28/11	36/14	A/C	2.500/10.000	500/750	8, 9, 10, 11
Class O Red	28/11	36/14	A/C	5.000/20.000	1.000/1.500	8, 9, 10, 11
Class 1 White	36	/14	A/C	10.000/40.000	7.500/11.250	8, 9, 10, 11
Class 2 Yellow	36	/14	A/C/H	20.000/50.000	17.000/25.500	8, 9, 10, 11
Class 3 Green	36	/14	A/C/H	30.000/60.000	26.500/39.750	8, 9, 10, 11
Class 4 Orange	41	/16	A/C/H	40.000/70.000	36.000/54.000	9, 10, 11, 12





Manufactured and tested in accordance with IEC 60903, EN 60903 and ASTM D120.



24-0010/12

Class O

11"/28cm Red/Yellow



	24-0010	24-0012
Category	A/C	A/C
Class	0	0
Cuff	Straight with bead	led edge
Max Use	1000V	1000V
Туре	1	1
Colour	Red	Yellow
Length	11" / 28cm	11" / 28cm
Sizes	8-11	8-11
Packaging	1 pair p/polybag ir	n box. 10 pairs p/carton.











Manufactured and tested in accordance with IEC 60903, EN 60903 and ASTM D120.



24-0020/22

Class 0

14"/36cm Red/Yellow



	24-0020	24-0022
Category	A/C	A/C
Class	0	0
Cuff	Straight with bead	led edge
Max Use	1000V	1000V
Туре	1	1
Colour	Red	Yellow
Length	14" / 36cm	14" / 36cm
Sizes	8-11	8-11
Packaging	1 pair p/polybag ir	box. 10 pairs p/carton.









Manufactured and tested in accordance with IEC 60903, EN 60903 and ASTM D120.



24-1024 / 24-2024

Class 1

14"/36cm Black/Red



24-1024	24-2024
A/C	A/C/H
1	2
Straight with beade	ed edge
7500V	17000V
1	1
Black/Red	Black/Red
14" / 36cm	14" / 36cm
8-11	8-11
1 pair p/polybag in	box. 10 pairs p/carto
	A/C 1 Straight with beader 7500V 1 Black/Red 14" / 36cm 8-11









*Made to Order. Contact to confirm lead times



Manufactured and tested in accordance with IEC 60903. EN 60903 and ASTM D120.



24-3024 / 24-4034

Class 3'

14"/36cm Black/Red 16"/41cm Black/Red



	24-3024	24-4034	
Category	A/C/H	A/C/H	
Class	3	4	
Cuff	Straight with beade	d edge	
Max Use	26500V	36000V	
Гуре	1	1	
Colour	Black/Red	Black/Red	
_ength	14" / 36cm	16" / 41cm	
Sizes	8-11	9-12	
Packaging	1 pair p/polybag in box. 10 pairs p/carton		









*Made to Order. Contact to confirm lead times



Manufactured and tested in accordance with IEC 60903. EN 60903 and ASTM D120.





Made in the UK and developed by Tilsatec's specialist team of yarn technologists, Rhino Yarn[®] technology is our engineered yarn process that combines various technical fibres and materials.

When blended together to create a composite yarn significantly higher levels of cut and mechanical protection can be achieved without compromising on comfort or dexterity.



High Cut Range

protection in Europe.

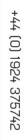
TILSATEC F

Tilsatec offer one of the widest ranges of hand and arm protection

solutions providing level F cut

Technology, on site in the UK.

Every product in the high cut range is made using our own Rhino Yarn®







Lightweight cut level F PU palm coated glove with thumb reinforcement



- EN388: 2016+A1:2018 level F cut resistance
- New Rhino Yarn® composition using lighter, finer steel
- Additional black nitrile reinforcement to thumb crotch for high action area increasing lifespan of glove
- Robust palm coating provides good dry and light oil grip
- Puncture level 3 and high abrasion levels
- Tested after washing to domestic and industrial wash standards.







Gauge	13gg	
Colour	Grey liner / Grey coating	
Cuff Style	Knit wrist	
Length	220-270mm	
Sizes	6/XS - 11/2XL	
Packaging	12 pairs/polybag 120 pairs/carton	

Applications / Industries

- Assembly
- Automotive industry
- Metal fabrication / stamping
- Glass Manufacturing
- White goods manufacturing









CUT

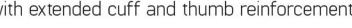
F

53-7112

₽K CE



Lightweight cut level F PU palm coated glove with extended cuff and thumb reinforcement



- EN388: 2016+A1:2018 level F cut resistance
- New Rhino Yarn® composition using lighter, finer steel
- Additional black nitrile reinforcement to thumb crotch for high action area increasing lifespan of glove
- Robust palm coating provides good dry and light oil grip
- Puncture level 3 and high abrasion levels
- Tested after washing to domestic and industrial wash standards.







Gauge	13gg
Colour	Grey liner / Grey coating
Cuff Style	Knit wrist
Length	220-270mm
Sizes	6/XS - 11/2XL
Packaging	12 pairs/polybag Sizes 7, 11 72 pairs/carton, 8, 9 & 10 120 pairs/carton

Applications / Industries

- Assembly
- Automotive industry
- Metal fabrication / stamping
- Glass manufacturing
- White goods manufacturing









TILSATEC

53-7121



Lightweight cut level F sandy foam nitrile palm coated glove with reinforcement



- EN388: 2016+A1:2018 level F cut resistance
- New Rhino Yarn[®] composition using lighter, finer steel
- Black nitrile reinforcement to thumb crotch
- 360 breathability reduces perspiration
- Sandy foam nitrile palm coating provides good wet and dry grip
- Can be laundered at 40°c for up to x3 washes













Gauge	13gg
Colour	Grey liner / Black coating
Cuff Style	Knit wrist
Length	220-270mm
Sizes	7/S - 11/2XL
Packaging	12 pairs/polybag 120 pairs/carton

Applications / Industries

- Assembly
- Automotive industry
- Metal fabrication / stamping
- Glass Manufacturing
- White goods manufacturing



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₽ CE

53-7191



Lightweight cut level **F** leather reinforced sandy foam nitrile palm coated glove with reinforcement

- EN388: 2016+A1:2018 level F cut resistance
- New Rhino Yarn® composition using lighter, finer steel
- EN407:2020 contact heat level 1
- Leather palm combined with foam nitrile coating delivers incredible robustness and handling comfort
- Foam nitrile palm coating allows breathability and prevents oil ingress to hand
- Leather reinforcement to thumb crotch









Gauge	13gg		
Colour	Grey liner / Grey leather		
Cuff Style	Knit wrist		
Length	220-270mm		
Sizes	7/S - 11/2XL		
Packaging	12 pairs/polybag 72 pairs/carton		

Applications / Industries

- Assembly
- Automotive industry
- Metal fabrication / stamping
- Glass Manufacturing
- White goods manufacturing













+44 [0] 1924 375742



Ultra-lightweight 18 gauge cut level F bi-polymer foam palm coated glove



- Rhino Yarn® cut resistant technology
- Extreme level F cut resistance without compromising dexterity (ANSI 105-2016: A9)
- Tough and durable bi-polymer foam coating
- Reinforced nitrile thumb crotch for added durability
- Excellent dry and light oil grip
- Tested after washing to domestic and industrial wash standards



Gauge

Colour

Length

Sizes

Cuff Style

Packaging





Knit wrist 230-270mm

7/S - 11/2XL

18gg



Black liner / Black coating

12 pairs/polybag 120 pairs/carton



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	783
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Applications / Industries

- Component assembly
- Aerospace
- Automotive industry
- Metal handling
- Manufacturing







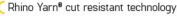
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50-6121



Medium weight cut level **F** sandy foam nitrile palm coated glove with thumb reinforcement



Level F cut resistance to EN388:2016+A1:2018

Thumb crotch is reinforced for additional resilience

High level of abrasion and durability

360 breathability

Dark colour hides dirt extending life of the glove

Can be laundered at 40°c for up to x3 washes

Black liner / Black coating

12 pairs/polybag 120 pairs/carton



Gauge

Colour

Length Sizes

Cuff Style

Packaging





10gg

Knit wrist 230-270mm

7/S - 11/2XL















Waste handling / Recycling

Applications / Industries

Metal fabrication/stamping

Glass and DGU

manufacturing

Transportation

Manufacturing Construction





+44 (0) 1924 375742

50-6111



Medium weight cut level **F** PU palm coated glove with thumb reinforcement



- Rhino Yarn^e cut resistant technology
- Level F cut resistance to EN388:2016+A1:2018
- EN407:2020 contact heat level 1
- Black thumb crotch reinforced for additional resilience in high action area
- PU Palm coating provides secure dry and light oil grip
- Tested after washing to domestic and industrial wash standards









Gauge	10gg
Colour	Black liner / Grey coating
Cuff Style	Knit wrist
Length	220-270mm
Sizes	6/XS - 11/2XL
Packaging	12 pairs/polybag 120 pairs/carton

Applications / Industries

- Assembly
- Automotive industry
- Metal fabrication/stamping
- Transportation
- (Manufacturing
- Construction

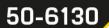






CUT

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Medium weight cut level **F** latex palm coated glove

- CRhino Yarn[®] cut resistant technology
- Level F cut resistance to EN388:2016+A1:2018
- EN407:2020 contact heat level 1
- Crinkle latex palm coating delivers excellent dry and wet grip
- Durable and hard wearing for heavy duty applications
- Tested after washing to domestic and industrial wash standards













Applications / Industries

- Glass manufacturing
- (Metal fabrication/stamping
- (Waste handling/Recycling
- Manufacturing
- Construction











Lightweight PU palm coated cut level E glove



- Rhino Yarn^e cut resistant technology
- EN388: 2016+A1:2018 level E cut resistance
- Fine 15 gauge lightweight liner
- High level of tactility and dexterity
- Durable PU palm coating provides secure dry grip and light oil grip
- Seamless liner and cuff gives a smooth, comfortable feel
- Tested after washing to domestic and industrial wash standards







Gauge	15gg	
Colour Grey liner / Grey coating		
Cuff Style	Knit wrist	
Length	230-270mm	
Sizes	7/S - 11/2XL	
Packaging	ging 12 pairs/polybag 120 pairs/carton	

Applications / Industries

- Final fix / light assembly
- Automotive assembly
- Light metal fabrication
- Transportation
- Aerospace
- White goods manufacturing







55-5120

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KK CE

Lightweight cut level E foam nitrile palm coated glove



EN388: 2016+A1:2018 level E cut resistance

- High level of tactility and dexterity
- Breathable liner and palm coating
- Foam nitrile palm delivers good dry and oil grip
- Tested after washing to industrial wash standard
- Approved for food contact to EU Regulation 10/2011











Gauge	15gg
Colour	Grey liner / Black coating
Cuff Style	Knit wrist
Length	230-270mm
Sizes	7/S - 11/2XL
Packaging	12 pairs/polybag 120 pairs/carton



Applications / Industries

- Final fix / light assembly
- Automotive assembly
- Light metal fabrication
- Aerospace
- White goods manufacturing
- Transport
- (Handling/packing foodstuffs









+44 [0] 1924 375742

55-5123



Lightweight cut level **E** fully coated nitrile glove with foam nitrile palm



- Rhino Yarn[®] cut resistant technology
- EN388: 2016+A1:2018 level E cut resistance
- EN407: 2020 contact heat level 1
- 15 gauge lightweight liner
- Good dexterity
- Foam nitrile palm delivers good dry and oil grip
- Flat nitrile full dip provides oil and liquid protection
- Tested after washing to industrial wash standard











Gauge	15gg
Colour	Grey liner / Black coating
Cuff Style	Knit wrist
Length	230-270mm
Sizes	7/S - 11/2XL
Packaging	12 pairs/polybag 120 pairs/carton

Applications / Industries

- Assembly
- Automotive industry
- Class manufacturing
- Metal fabrication / stamping
- Construction
- White goods manufacturing









CUT

₽ CE

53-4111





Lightweight cut level **D** PU palm coated glove with reinforcement

- CRhino Yarn^e cut resistant technology
- EN388: 2016+A1:2018 level D cut resistance
- 13 gauge lightweight liner with good dexterity
- Durable PU palm coating provides good dry and light oil grip
- Black nitrile reinforcement to thumb crotch for high action area increasing lifespan of glove
- (Smooth and comfortable, but highly robust and durable



Gauge	13gg
Colour	Grey liner / Grey coating
Cuff Style	Knit wrist
Length	230-270mm
Sizes	7/S - 11/2XL
Packaging	12 pairs/polybag 120 pairs/carton





Automotive industry

Light metal fabrication / stamping

Construction

White goods manufacturing











Ultra-lightweight 18 gauge cut level **D** PU palm coated glove

Rhino Yarn^e cut resistant technology

18gg

Knit wrist 230-270mm

7/S - 11/2XL

- EN388:2016+A1:2018 level D cut resistance
- Exceptional level of fingertip sensitivity and tactility
- Seamless liner and cuff gives a smooth, comfortable feel
- Durable PU coating on such a fine lightweight glove

Grey liner / Grey coating

12 pairs/polybag 120 pairs/carton



Gauge

Colour

Length

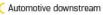
Sizes

Cuff Style

Packaging

Applications	/ Industries







Aerospace

White goods manufacturing



CUT











CUT

₽ CE

58-4120



Ultra-lightweight 18 gauge cut level D foam flex palm coated glove

- Rhino Yarn⁸ cut resistant technology
- EN388:2016+A1:2018 level D cut resistance
- Exceptional level of fingertip sensitivity and tactility
- 360 degrees breathability keeps hands cool and dry
- Seamless liner and cuff gives a smooth, comfortable feel





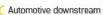




Gauge	18gg
Colour	Grey liner / Black coating
Cuff Style	Knit wrist
Length	230-270mm
Sizes	7/S - 11/2XL
Packaging	12 pairs/polybag 120 pairs/carton

Applications / Industries







Aerospace

White goods manufacturing



X









Applications / Industries

- Assembly
- Automotive industry
- Glass manufacturing
- Metal fabrication / stamping
- Construction
- White goods manufacturing











Comfort+ Series High comfort cut level **C** glove with clean PU palm coating

- The first in a new glove series Comfort+ which feels incredibly soft and comfortable for all day wear
- (New non-reinforced Rhino Yarn[®] structure with UHWMPE and high power spandex for optimal cut and comfort
- EN388:2016+A1:2018 level C cut resistance
- 🕻 13 gauge seamless liner free from steel and glass fibres
- Clean PU coating (ultra-low levels of DMF*)
- Good dry grip for secure handling
- Touchscreen enabled forefinger
- Tested after washing to domestic and industrial wash standards

Gauge	13gg
Colour	White liner / Grey coating
Cuff Style	Knit wrist
Length	220-270mm
Sizes	6/XS - 11/2XL
Packaging	12 pairs/polybag 120 pairs/carton

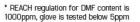




















Throughout 2023 we will be setting out our 3 year strategy and commitments we are making to reduce the impact of our operations on the environment.

We're on a journey, one that's never finished, but we're working towards positive change across manufacturing, logistics, energy consumption, recycling and our raw materials to bring you high performance hand and arm protection which allows you to reduce your carbon footprint and take energy intensive products out of your supply chain.

EnVision⁶ is the umbrella under which our sustainability program sits and it's underpinned by our 3 key pillars; **People**, **Planet**, **Protection**.



People

As a member of Sedex we are committed to being a responsible business, sourcing responsibly, and improving ethical standards and working conditions within the supply chain. All our manufacturing sites globally adhere to the Sedex Members Ethical Trade Audit (SMETA) or equivalent, but we also have our own stringent standards and criteria we set for our operations.



Planet

Utilising our yarn engineering experience we aim to replace virgin synthetic materials with recycled and/or plant-based yarns.

- Reduce carbon footprint working towards carbon neutral by 2026.
- Removing single use plastics from our inner packaging
- FSC certified carton packing, inner packaging, catalogues and print materials
- Reduce the use of chemicals and solvents in all operations

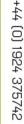


Protection

Deliver hand protection solutions to meet all handling tasks from general purpose through to high cut, each with a sustainable yarn content of >50%.

The EnVision[®] range sets a new standard in environmentally friendly cut gloves that don't compromise on comfort, dexterity or durability.













EnVision® cut level A glove with microfoam palm coating

- 65% of the glove is made with sustainable materials (incl. coating)
- Manufactured using a unique combination of recycled polyester (rPET) and recycled nylon (rPA) resulting in a total CO2 reduction of >320 grams per pair
- Energy savings of 0.276 kwh and 6 litres less water consumption per pair
- Level A cut resistance to EN388:2016+A1:2018
- High level abrasion resistance (>20,000 cycles) gives durability and increases life span
- Touchscreen compatible reducing need to remove gloves
- Thumb crotch reinforced for additional resilience in high action area
- Microfoam palm coating delivers secure dry and oil grip
- Incredible fine tactility and dexterity, close fitting and soft comfort













Gauge

Colour

Length

Sizes

Cuff Style

Packaging

15qq

Knit wrist

220-270mm

6/XS - 11/2XL

12 pairs/paper band

Sizes 6, 7 & 11 72 pairs/carton

Sizes 8, 9 & 10 120 pairs/carton

Navy liner / Black coating

Applications / Industries

- Intricate assembly
- Automotive downstream
- Aftermarket / Component handling
- Construction
- White goods manufacturing
- Aerospace
- Logistics and warehousing

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EnVision® cut level C glove with microfoam palm coating

- 64% of the glove is made with sustainable materials (inc. coating)
- Manufactured using a unique combination of Bio Based Dyneema and recycled polyester (rPET) resulting in a total CO2 reduction of >820 grams per pair
- Energy savings of 0.302 kwh and 4 litres less water consumption
- Level C cut resistance to EN388:2016+A1:2018
- Touchscreen compatible reducing need to remove gloves
- Thumb crotch reinforced for additional resilience in high action area
- Microfoam palm coating delivers secure dry and oil grip
- Incredible fine tactility and dexterity, close fitting and soft comfort













Gauge

Applications / Industries

- (Intricate assembly
- Automotive downstream
- Aftermarket / Component handling
- Construction
- White goods manufacturing
- Aerospace









15qq

Sizes 8, 9 & 10 120 pairs/carton









- (54% of the glove is made with sustainable materials (inc. coating)
- Manufactured using a unique combination of Bio Based Dyneema and recycled polyester (rPET) resulting in a total CO₂ reduction of >780 grams per pair
- Energy savings of 0.254 kwh and 3.3 litres less water consumption per pair
- Incredible level F cut resistance to EN388:2016+A1:2018
- Touchscreen compatible reducing need to remove gloves between tasks
- Thumb crotch reinforced for additional resilience in high action area
- Microfoam palm coating delivers secure dry and oil grip
- High dexterity and tactility, close fitting and soft comfort













Applications / Industries

- (Intricate assembly
- (Automotive downstream
- Aftermarket / Component handling
- Construction
- White goods manufacturing
- Aerospace





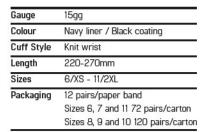
















Dyneema*

Bio-based Dyneema® is the first ever bio-based ultra-high molecular weight polyethylene fibre, reducing reliance on fossil fuel based resources. All bio-based Dyneema® fibres have the exact same characteristics and performance as conventional Dyneema®. Made from trees (a bi-product of pulp and timber) this is known as the mass balance approach, certified by ISCC (International Sustainability & Carbon Certification).



Carbon emissions reduced by >600q for every pair of gloves made with Bio-Based Dyneema®, when compared to Generic HMPE yarn.



Ultra-lightweight **ESD** glove with microfoam palm coating

- Tested to EN 1149-2:1997 and EN 16350 ESD Antistatic
- Exceptional level of fingertip sensitivity and tactility
- C Touchscreen compatible
- 360 degrees breathability keeps hands cool and dry
- 18 gauge seamless liner and cuff give a smooth, comfortable feel













Gauge	18gg		
Colour	Navy liner / Black coating		
Cuff Style	Knit wrist		
Length	230-270mm		
Sizes	7/S - 11/2XL		
Packaging	12 pairs/polybag Sizes 7, 11 72 pairs/carton, 8, 9 & 10 120 pairs/carton		

Final fix / light assembly

Applications / Industries

- Finishing and Inspection
- Electronics
- Aerospace
- C Logistics and warehousing



CUT



58-2221

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Multi-purpose ultra-lightweight cut level **B** sandy foam nitrile palm coated glove



- Made using advanced knitting technology it delivers an ergonomic fit and feel for incredible dexterity and tactility
- Level B cut resistance to EN388: 2016
- High level 4 abrasion resistance
- Sandy foam nitrile palm coating delivers secure dry and oil grip
- Thumb crotch reinforcement gives additional durability and longevity









Gauge	18gg
Colour	Grey liner / Black coating
Cuff Style	Knit wrist
Length	230-270mm
Sizes	7/S - 11/2XL
Packaging	12 pairs/polybag Sizes 7, 11 72 pairs/carton 8, 9 & 10 120 pairs/cartor

Applications / Industries

- (Intricate assembly
- Automotive downstream after market / component handling
- Construction
- (White goods manufacturing
- Aerospace







Multi-purpose cut level C PU palm coated glove

- Cost efficient solution delivering level C cut resistance to EN388:2016+A1:2018
- Hard wearing robust PU coating
- Good grip in dry and slight oil conditions
- Dirt masking colour for longer wear life



Gauge	13gg
Colour	Grey liner / Grey coating
Cuff Style	Knit wrist
Length	230-270mm
Sizes	7/S - 11/2XL
Packaging	12 nairs/polybag 120 nairs/carton



Applications / Industries

- Automotive downstream
- Metal / component handling
- Construction

EN388:2016

White goods manufacturing





58-3710

₽ CE



Multi-purpose ultra-lightweight cut level C PU coated glove

- EN388:2016+A1:2018 level C cut resistance
- High level dexterity
- Tough, hard wearing PU palm coating
- Comfortable, form fitting seamless liner



18gg
Grey liner / Grey coating
Knit wrist
230-270mm
7/S - 11/2XL
12 pairs/polybag 120 pairs/carton



Applications / Industries

- (Automotive downstream / Aftermarket
- Component handling
- Construction
- White goods manufacturing
- Aerospace





CUT



K CE



Lightweight cut level F antimicrobial food safe glove



- Inherent antimicrobial component safe for food handling
- New yarn structure (free from glass fibre) delivers better grip and mechanical protection
- Tested to EN ISO 15797 industrial wash test to withstand x50 washes at up to 85°C and drying up to 70°C
- Extended cuff for added protection
- Ambidextrous







Gauge	13gg
Colour	Blue liner
Cuff Style	Knit wrist
Length	255-305mm
Sizes	6/XS - 11/2XL
Packaging	6 pieces/polybag 216 pieces/carton

CUT

Applications / Industries

- Meat carving and deboning
- Butchery
- Fish filleting and processing
- Suitable for beef, pork and poultry



Made in the UK









Medium weight cut level F antimicrobial food safe glove



- EN388:2016 level F (ANSI 105-2016 A8) cut resistance
- Inherent antimicrobial component safe for food handling
- New yarn structure (free from glass fibre) delivers better grip and mechanical protection
- Tested to EN ISO 15797 industrial wash test to withstand x50 washes at up to 85°C and drying up to 70°C with no effect on cut resistance
- Extended cuff for added protection
- Ambidextrous







Gauge	10gg
Colour	Blue liner
Cuff Style	Knit wrist
Length	255-305mm
Sizes	6/XS - 11/2XL
Packaging	6 pieces/polybag 144 pieces/carton

Applications / Industries

- Meat carving and deboning
- Butchery
- Fish filleting and processing
- Suitable for beef, pork and poultry



Made in the UK





₽R CE

73-9110



Heavyweight cut level F antimicrobial food safe glove

- EN388:2016 level F (ANSI 105-2016 A9) cut resistance
- Inherent antimicrobial component safe for food handling
- New yarn structure (free from glass fibre) delivers better grip and mechanical protection
- Tested to EN ISO 15797 industrial wash test to withstand x50 washes at up to 85°C and drying up to 70°C with no effect on cut resistance
- Extended cuff for added protection
- Ambidextrous









Gauge	7gg
Colour	Blue liner
Cuff Style	Knit wrist
Length	255-305mm
Sizes	6/XS - 11/2XL
Packaging	6 pieces/polybag 144 pieces/carton





Applications / Industries

- Meat carving and deboning
- Butchery
- Fish filleting and processing
- Suitable for beef, pork and poultry





Made in the UK









Extreme Cut & Puncture Protection

Cut Puncture and Needlestick Protection

RHINOGUARD™ is a highly engineered textile composite primarily designed to provide the highest levels of protection against a wide range of puncture hazards.

The material is constructed from an innovative combination of advanced fibres, modified fabric structure and a unique coating technology to deliver high levels of protection against both large and small puncture threats including needles and syringes.



High performance hypodermic needle puncture resistant materials are tested on the tensometer with single use validated 28, 25 and 21 gauge needles. This test ensures that the materials offer adequate protection against hypodermic needle hazards where required.



Mechanics glove with Rhinoguard™





- EN388:2016+A1:2018 level E cut resistance
- Rhino Yarn[®] cut resistant technology
- EN388: 2016 level 4 puncture resistance
- ASTM F2878-19 hypodermic needle test: 6.4 Newtons (Level 3)
- Leather reinforcement for high action areas
- Rubber pull tab for quick donning and doffing
- Neoprene expandable wrist for safety and comfort











Applications / Industries

- Emergency services:
- Police, Fire Fighters, Search and Rescue
- Security services
- Local authorities, house clearance teams
- Waste management
- Metal forming / handling







Gauge	N/A
Colour	Black / Yellow
Cuff Style	Neoprene
Length	230-270mm
Sizes	8/M - 11/2XL
Packaging	Packed per pair 36 pairs/carton





49-5410

Rhinoguard™

EN388:2016

arm guard



- Rhino Yarn[®] cut resistant technology
- EN388:2016+A1:2018 level F cut resistance
- EN388: 2016 level 4 puncture resistance
- ASTM F2878-19 hypodermic needle test: 5.7 Newtons (Level 2)
- Double width adjustable straps for a secure fit
- Liquid repellent and wipe clean























Hot end gauntlet glove



- Rhino Yarn® cut resistant technology
- EN388:2016+A1:2018 level C cut resistance
- EN407:2020 contact heat level 2
- Loop pile knitted glove section for improved thermal protection and cushioning from repeated handling
- Extended gauntlet style cuff provides forearm protection
- Black colour hides dirt, extending life of the glove
- Ambidextrous



Gauge

Colour

Length

Sizes Packaging

Cuff Style





420-440mm

8/M & 10/XL

7gg



12 pairs p/polybag 36 pairs/carton



Applications / Industries

C Glass manufacturing

(High heat areas requiring

some mechanical protection

(Hot end operations



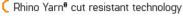


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37-4523

Heavy duty cut resistant aramid knit glove





- EN388:2016+A1:2018 level D cut resistance
- Durable and long lasting
- EN407:2020 limited flame spread level 4
- EN407:2020 contact heat level 1 protection
- Reinforced thumb crotch for high action areas





Gauge	7gg
Colour	Yellow
Cuff Style	Knit wrist
Length	230-260mm
Sizes	7/S - 10/XL
Packaging	12 pairs/polybag 96 pairs/carton

- Assembly
- Automotive industry
- Metal fabrication / stamping











TILSATED

+44 (0) 1924 375742

37-4528



X-Heavy duty cut resistant aramid knit glove



- C Rhino Yarn® cut resistant technology
- EN388:2016+A1:2018 level D cut resistance
- (Durable and long lasting
- C EN407:2020 limited flame spread level 4
- EN407:2020 contact heat level 1 protection
- Reinforced thumb crotch for high action areas





Gauge	7gg
Colour	Yellow
Cuff Style	Knit wrist
Length	220-250mm
Sizes	6/XS - 9/L
Packaging	12 pairs/polybag 96 pairs/carton

Applications / Industries

- (Assembly
- Automotive industry
- (Metal fabrication / stamping











CUT

37-5620

₽ CE



Medium duty cut resistant aramid knit glove

- C Rhino Yarn⁸ cut resistant technology
- EN388:2016+A1:2018 level B cut resistance
- C Durable and long lasting
- EN407:2020 contact heat level 1 protection
- Reinforced thumb crotch for high action areas





Gauge	7gg
Colour	Yellow
Cuff Style	Knit wrist
Length	240-250mm
Sizes	8/M - 9/L
Packaging	12 pairs/polybag 96 pairs/carton

Applications / Industries

- (Assembly
- Automotive industry
- Metal fabrication / stamping



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Medium duty cut level F glove



- EN388:2016+A1:2018 level F cut resistance
- EN407:2020 contact heat level 1
- Soft, comfortable seamless liner with good dexterity
- (Reinforced thumb crotch for high action area



Gauge	7gg
Colour	Yellow/grey liner
Cuff Style	Knit wrist
Length	230-260mm
Sizes	7/S - 10/XL
Packaging	12 pairs/polybag 96 pairs/carton



Applications / Industries

- (Assembly
- Metal fabrication
- Glass industry
- C Logistics















37-6630

₽ CE



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Medium duty cut level F leather palm glove

- C Rhino Yarn[®] cut resistant technology
- EN388:2016+A1:2018 level F cut resistance
- EN407:2020 contact heat level 1
- EN388 level 3 puncture resistance
- Leather palm suitable for oily and dry handling
- Enhanced protection to finger tips from extended leather palm reinforced thumb crotch







Gauge	7gg
Colour	Grey liner / Grey palm
Cuff Style	Knit wrist
Length	240-260mm
Sizes	8/M - 10/XL
Packaging	12 pairs/polybag 72 pairs/carton



- (Assembly
- Automotive industry
- Metal fabrication / stamping
- Glass industry















Lightweight FR backed cut level F leather palm glove



- EN388:2016+A1:2018 level F cut resistance
- EN407:2020 contact heat level 1
- EN388 level 4 puncture resistance
- Leather palm provides oil resistance and good grip
- Flame resistant fabric provides protection to the back of the hand









Gauge	13gg
Colour	Black fabric / Grey palm
Cuff Style	Knit wrist
Length	240-260mm
Sizes	8/M - 10/XL
Packaging	12 pairs/polybag 72 pairs/carton

Applications / Industries

- (Assembly
- (Automotive industry
- Metal fabrication / stamping
- COil & Gas
- (Utilities



CUT









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Medium duty FR backed cut level F leather palm glove





- EN388:2016+A1:2018 level F cut resistance
- EN407:2020 contact heat level 1
- EN388 level 3 puncture resistance
- Leather palm provides oil resistance and good grip
- Flame resistant fabric provides protection to the back of the hand









Gauge	7gg
Colour	Yellow fabric / Grey palm
Cuff Style	Knit wrist
Length	240-260mm
Sizes	8/M - 10/XL
Packaging	12 pairs/polybag 72 pairs/carton

Applications / Industries

- (Assembly
- C Automotive industry
- Metal fabrication / stamping
- COIL & Gas
- Utilities

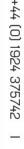












Arm and Body Protection

The new 90 series of sweatshirts is the culmination of Tilsatec's deep expertise in delivering high level, comfortable cut protection in an innovative new high performance fabric technology.

Designed to protect workers in industries such as glass manufacturing, metal fabrication, automotive manufacturing, and waste recycling or any other environment with high cut hazards.

90-5113





₽K C€

Crew Neck Sweatshirt with Breathable Back



- Made with Tilsatec's innovative new fabric technology
- Cut and slash resistant, high abrasion resistance and puncture protection to EN388:2016+A1:2018
- Delivers body protection covering major arteries and key vulnerable areas
- Cool touch, lightweight fabric provides maximum user comfort
- Double stitched comfort cuff with built in thumb crotch
- (Underarm vents for enhanced breathability
- Breathable mesh back reduces perspiration keeping you cooler for longer
- Stretch fabric trim to neck and base sits comfortably against the skin

*EN388:2016+A1:2018 classification is based on testing the sleeve area only

Applications / Industries

- CGlass industry
- (Handling raw glass
- Cutting stations
- (Automotive industry
- Metal fabrication / stamping
- (Waste Recycling



Made in the UK



Gauge	N/A
Colour	Grey fabric/Black trim
Cuff Style	Comfort cuff w/thumb slot

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Coloui	or of Tability Black tilli
Cuff Style	Comfort cuff w/thumb slot
Length	See size chart
Sizes	S - 2XL
Packaging	Packed p/piece

Size	To fit chest	Length
S	86CM/34"	73CM
М	92CM/36"	74CM
L	102CM/40"	75CM
XL	112CM/44"	75CM
2XL	122CM/48"	76CM

The advanced garment design is developed using the latest in cutting edge technology and manufacturing techniques.



Soft and lightweight, the fabric has a 'cool to the touch feel' and the inclusion of under arm vents ensures maximum wearer comfort.



CUT

90-5233





₽ CE

Turtleneck Sweatshirt (with full coverage)



- Made with Tilsatec's innovative new fabric technology
- Cut and slash resistant, high abrasion resistance and puncture protection to EN388:2016+A1:2018
- Delivers full body protection front and back covering major arteries and key vulnerable areas
- High turtleneck design provides added protection when handling larger panels
- Cool touch, lightweight fabric provides maximum user comfort
- Double stitched comfort cuff with built in thumb crotch
- Underarm vents for enhanced breathability
- Soft inner fabric on neck for improved comfort

*EN388:2016+A1:2018 classification is based on testing the sleeve area only

- CGlass industry
- CHandling raw glass
- Cutting stations
- C Automotive industry
- Metal fabrication / stamping
- (Waste Recycling











Gauge	N/A Grey fabric/Black trim	
Colour		
Cuff Style	Comfort cuff w/thumb slot	
Length	See size chart	
Sizes	S - 2XL	
Packaging	Packed p/piece	

Size	To fit chest	Length
S	86CM/34"	73CM
М	92CM/36"	74CM
L	102CM/40"	75CM
XL	112CM/44"	75CM
2XL	122CM/48"	76CM

81-4121-ck/cv



Medium weight cool touch cut level **D** sleeve with comfort cuff



- Rhino Yarn[®] cut resistant technology
- EN388:2016+A1:2018 level D cut resistance
- Comfortable thumb slot keeps sleeve in place without discomfort
- 81-4121/CK elasticated top to keep sleeve up
- 81-4121/CV hook and loop adjustable strap



Gauge	13gg	
Colour	Light Grey	
Cuff Style	Comfort cuff with thumb slot	
Length	21" / 53cm	
Sizes	One size	
Packaging	Packed p/piece 100 pieces p/carton	

Applications / Industries

- Automotive industry
- Aerospace
- Metal fabrication / stamping
- Manufacturing
- Glass industry



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CUT

81-6121-ск/су



Medium weight cool touch cut level F sleeve with comfort cuff

- Level F cut resistance to EN388:2016+A1:2018
- Rhino Yarn[®] cut resistant technology
- Comfortable thumb slot keeps sleeve in place without discomfort
- 81-6121/CK elasticated top to keep sleeve up
- 81-6121/CV hook and loop adjustable strap



Gauge	13gg	
Colour	Light Grey	
Cuff Style	Comfort cuff with thumb slot	
Length	21" / 53cm	
Sizes	One size	
Packaging	Packed p/piece 100 pieces p/carton	

- Automotive industry
- Aerospace
- Metal fabrication / stamping
- Manufacturing
- Glass industry





















EN407:2020 limited flame spread level 3

EN407:2020 contact heat level 1

Hook and loop top fastening strap for adjustable fit

Thumb slot to keep sleeve in place

Various finishes and fixings available on request



Automotive industry

Metal fabrication / stamping

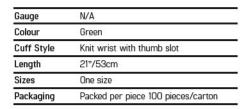
Manufacturing





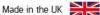
















CUT

84-3520



20" flame retardant cut level E sleeve with thumb slot



- C Rhino Yarn[®] cut resistant technology
- Lightweight and loose fitting
- Inherently flame resistant
- EN407:2020 limited flame spread level 3
- Hook and loop top fastening strap for adjustable fit
- Thumb slot to keep sleeve in place





Gauge	N/A	
Colour	Yellow	
Cuff Style	Knit wrist with thumb slot	
Length	20"/50cm	
Sizes	One size	
Packaging	Packed per piece 50 pieces/carton	

Applications / Industries

- Automotive industry
- Metal fabrication / stamping
- Manufacturing
- Aerospace



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18" aramid sleeve with thumb slot





- EN388: 2016+A1:2018 level C cut resistance
- Rhino Yarn[®] technology
- EN407:2020 contact heat level 1
- Tubular elasticated style with thumb slot to keep sleeve in place
- Available as style 84-3118BE with option of bar tack fingers



Gauge	N/A Yellow	
Colour		
Cuff Style	Knit wrist with thumb slot	
Length	18" / 45cm	
Sizes	One size	
Packaging	Packed per piece 100 pairs/carton	

Applications / Industries

- Class manufacturing
- Metal fabrication / stamping
- Automotive industry
- Manufacturing
- Aerospace











CUT

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85-5110/14/18/21



10/14/18/21" cut level E tubular sleeve with thumb slot

- EN388:2016+A1:2018 level E cut resistance
- EN407:2020 contact heat level 1
- Seamless knit with a smooth finish
- Tubular close fitting shape for maximum dexterity
- Thumb slot to keep sleeve in place
- Available in lengths of 10", 14".18" and 21"
- Elasticated top to prevent sleeve falling down



Gauge	N/A	
Colour	Green	
Cuff Style	Knit wrist with thumb slot	
Length	10"/25cm 14"/35cm 18"/45cm 21"/53cn	
Sizes	One size	
Packaging	Packed per piece 100 pieces/carton	

- Automotive industry
- Metal fabrication / stamping
- Manufacturing
- Glass industry
- Waste handling













8" cut level F wrist guard with adjustable straps

- EN388:2016+A1:2018 level F cut resistance
- EN388 level 4 puncture resistance
- Protects the wrist and lower arm
- Adjustable sizing for accurate fit and wearer comfort
- Dark colour hides dirt
- Will not mark glass panels



		_
Gauge	N/A	
Colour	Black with black straps	
Cuff Style	N/A	•
ength.	8"/20cm	
Sizes	One size	
Packaging	Packed per pair 25 pairs/carton	

Applications / Industries

- Assembly
- Automotive industry
- Glass manufacturing
- Metal fabrication / stamping
- Transportation
- White goods manufacturing



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Made in the UK





74-8111

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Medium weight cut level F antimicrobial food safe sleeve

- EN388:2016 level F (ANSI 105-2016 A8) cut resistance
- CInherent antimicrobial component safe for food handling
- Tested to EN ISO 15797 industrial wash test to withstand x50 washes at up to 85°C and drying up to 70°C with no effect on cut resistance
- Designed for use with the Tilsatec food safe glove range
- Thumb slot for a secure fit



Gauge	10gg	
Colour	Blue	
Cuff Style	Knit wrist	
Length	20"/50cm	
Sizes	One Size	
Packaging	Packed per piece 100 pieces/carton	





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Applications / Industries

- Meat carving and deboning
- Butchery
- Fish filleting and processing
- Suitable for beef, pork and poultry



Made in the UK

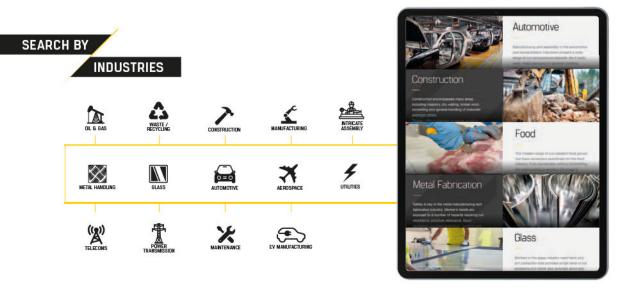






ONLINE RESOURCES

Visit our website tilsatec.com to search for your ideal hand, arm or body protection by EN standard, product code, performance features or description. Here you have access to a range of resources including product specification sheets, EU declarations of conformity, videos, infographics, blog articles and much more.



EN STANDARDS

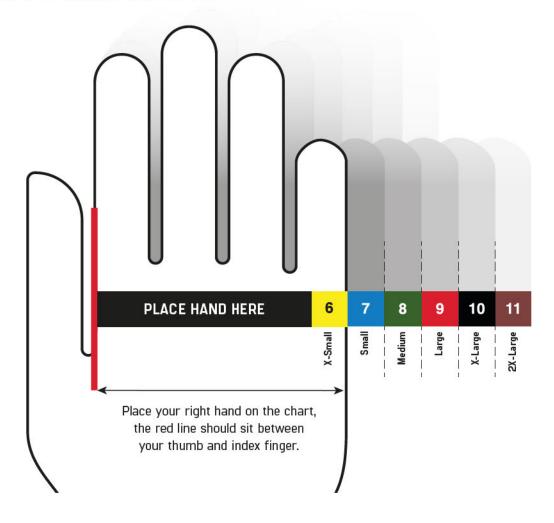


RESOURCES



GLOVE SIZING CHART

Tilsatec gloves are available in a range of sizes. To ensure optimum fit and comfort, selecting the correct size glove is essential. Measure your hand against the chart below to see what size glove you need.



^{*}Select sizes are not standard in all styles. Contact us to discuss your special sizing needs.



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