TILSATEC®

High performance hand, arm & body protection solutions

2019/
2020

CONTENTS

CUT RESISTANCE SPECIALISTS

Tilsatec is a UK manufacturer with a long history in developing technical yarns and materials for PPE. Specialising in cut resistant hand and arm 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.

RHINOYARN®

ONE STORY, MANY STRANDS

Rhino Yarn™ is much more than a process. It's the combination of many strands. Each as integral and essential as the rest. Together, they make us incredibly strong. They're all part of a story we're incredibly proud of, and one we're still writing. A story of some amazing, independent minded, innovative, hard working people. And a brave Eureka moment that kick started our business.

"As a proudly independent, inventive and industrious business, ours has always been a slightly different story to the norm."

Ben Griffiths, Managing Director

A people, a place

The first two strands in the Rhino Yarn™ story are a place, Wakefield in West Yorkshire, and the people who live here. In the 19th century, this is where water running down from the gritstone Pennine hills came together with an industrious, committed, highly skilled local population. The result was the perfect conditions for a wool textile industry that went on to export its products across the world.

"I've worked here for 25 years, and so did many friends, neighbours and members of my family. I even met my husband here. We used to fill two buses from our estate. Every day we have a laugh. We're a really tight knit team."
Zoe, Yarn Technician

A business

The next strand in our story was the foundation of a business. In 1880 Harrap Brothers, a spinning business, was launched in West Yorkshire. In 1890 it moved to Wakefield, and here it has remained ever since. In 1934 it became Sirdar in honour of Lord Kitchener's appointment as Sirdar of the Egyptian army. And in 1989 Tilsa Yarns was acquired to manufacture hosiery and fashion yarns.

+44 (0) 1924 375742

An innovative mindset

We've never been afraid to try new things. So, in 2001 our yarn technologists began developing composite yarn structures with a stainless steel core. As soon as we knew we were able to process and spin steel to incredibly high grades whilst achieving high cut performance, we knew we were on to something. However, when we took this technology out to market, interest was muted. Undaunted, we began to manufacture our own products made from our proprietary cut-resistant Rhino Yarn™.

A sense of purpose

Since then, we've built a reputation as innovative specialists in cut resistant fibres, with a comprehensive range of cut resistant hand and arm 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.

"We've always been driven to innovate. Pushing the boundaries of what's possible, to go finer and lighter. To find the optimum balance between comfort and cut resistance."

The thread goes on

Determined to remain in complete control we 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. It means we can try out new ideas and fresh combinations of materials, while maintaining our own stringent due diligence and quality control. Meanwhile, our search for ever more comfortable, flexible and durable cut-resistant yarn technologies continues.

TILSATEC MECHANICAL TESTING LABORATORY

10386

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. Laboratory accreditation uses the standard ISO 17025 to assess a laboratory's ability to produce precise, accurate tests and data including:

- **Compliance monitoring and compilation of CE certificate applications**
- **Performance and quality control testing of raw materials, yarns and finished products**
- **Supporting of new product development**
- **Ongoing due diligence product testing**
- **Bespoke in house testing to suit customer's specific hazards/requirements**
- **Benchmark testing to ensure test results are in line with industry standards**

For a list of accredited testing carried out by the lab vist:
ukas.com/wp-content/uploads/schedule_uploads/00002/10386Testing%20Single.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.

Certificate Number: 14054
ISO 9001

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.

+44 (0) 1924 375742

EN388: 2016 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 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 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.

EN21420:2020 General Requirements

The laboratory carries out the general requirements laid out in the recently updated EN 21420 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.

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.

CE 0321

EN STANDARDS EXPLAINED

EN21420:2020 - 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:

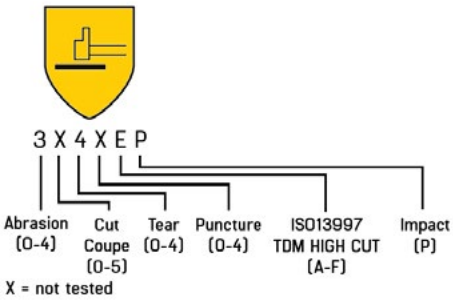
Glove Size	Hand Circumference (mm)	Hand Length (mm)
4	101	<160
5	127	<160
6	152	160
7	178	171
8	203	182
9	229	192
10	254	204
11	279	215
12	304	>215
13	329	>215

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

EN388: 2016 - 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.



Coupe Blade Cut Test (1-5) Updated in 2016

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.

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)

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.

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 388:2016 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.

A **2 - 5 NEWTONS**
- Light material handling
- Small parts assembly
- Light duty general purpose

B **5 - 10 NEWTONS**
- Packaging
- White goods manufacturing
- Warehousing / Logistics

C **10 - 15 NEWTONS**
- Metal handling
- Light assembly
- Maintenance works

D **15 - 22 NEWTONS**
- Electrical installation
- Automotive assembly
- Engineering
- Utilities

E **22 - 30 NEWTONS**
- Metal stamping
- Glass manufacturing
- Automotive assembly
- Food processing

F **30 NEWTONS +**
- Heavy metal stamping
- Waste management
- Recycling
- Glass handling

Impact Protection - New to the standard in 2016
The impact test is a new optional addition to the EN388 standard, designed for gloves that provide impact resistance (usually to the back of the hand and knuckles). Gloves are tested to EN 13594:2015 Protective Gloves for Motorcycle Riders. Where gloves have passed the test the letter 'P' will be displayed.

EN407: 2004 - Protection from Thermal Hazards
The heat and flame pictogram is shown with six numbers, representing performance levels against specific thermal hazard tests.

a b c d e f

Performance Level		1	2	3	4
a. Burning Behaviour	After flame time	< 20 s	< 10 s	< 3 s	< 2 s
	After glow time	no requir.	< 120 s	< 25 s	< 5 s
b. Contact Heat	Contact temperature	100°c	250°c	350°c	500°c
	Threshold time	> 15 s	> 15 s	> 15 s	> 15 s
c. Convective heat (heat transfer delay)		> 4 s	> 7 s	> 10 s	> 18 s
d. Radiant heat (heat transfer delay)		> 7 s	> 20 s	> 50 s	> 95 s
e. Small drops molten metal (# drops)		> 10	> 15	> 25	> 35
f. Large quantity molten metal (mass)		30g	60g	120g	200g

Burning Behaviour
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.

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 burning behaviour must also be tested and pass level 1.

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 burning behaviour test.

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 burning behaviour test.

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 burning behaviour test.

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 pre-painted 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.

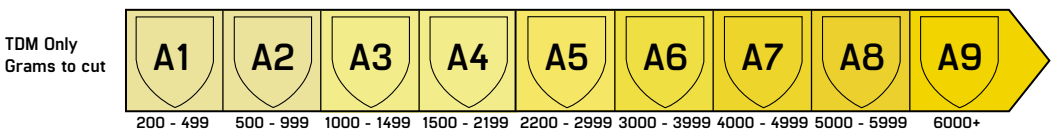
Compliance with the allowable limits enables food gloves to be marked with the following 'food safe' pictogram:

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 EU/ANSI test methods and classification levels to provide a clearer basis for comparison of product performance in a global market.

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

AEROSPACE · AUTOMOTIVE · GLASS · MANUFACTURING · GENERAL ASSEMBLY · INTRICATE ASSEMBLY

METAL HANDLING · WAREHOUSING · UTILITIES · WASTE / RECYCLING · OIL & GAS · LOGISTICS

TECHNOLOGIES / FEATURES

ANTISTATIC · BREATHABLE · HEAT PROTECTION · DMF FREE · DRY GRIP · SILICONE FREE · LIQUID REPELLENT · NEEDLESTICK PROTECTION · OIL RESISTANCE · PUNCTURE RESISTANCE

+44 (0) 1924 375742

GUIDE TO GLOVE COATINGS

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.

Micropore Foam Nitrile

- Acts like a sponge with oily surfaces
- Superb wet and oil grip
- Fully breathable keeping hands cool and comfortable

Polyurethane (PU)

- Considered ideal for cut resistant gloves
- Durable and flexible, excellent coating for sharp handling and assembly

Flat Nitrile

- Tough and durable with good abrasion resistance
- Typically stands up well to oil, grease, and other liquids

Latex

- High elasticity and grip
- Good abrasion and puncture resistance
- Very durable, ideal for waste recycling, glass and construction

Reinforced Thumb Crotch

- Nitrile disc as an additional layer between thumb and index finger
- Increased durability in high action area
- Extends life of the glove

PVC Dot Palm

- A PVC dot pattern can be added to some styles on the palm and fingers to provide enhanced grip without any reduction in dexterity

Multi-purpose low-mid cut protection

For businesses whose operations require multiple cut resistant hand protection solutions to meet the needs of every department and function, Tilsatec now offer a range of multi-purpose, cost effective gloves for mid to low cut hazard environments.

Engineered to deliver optimum comfort, grip, durability and value with the option of a micro foam, bi-polymer or polyurethane palm coating, they are specifically designed for applications requiring level B or level C cut resistance to EN388:2016.

53
3210

NEW **Multi-purpose** cut level **C** PU palm coated glove

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

EN388: 2016
4X43C

Applications / Industries

- General Assembly
- Automotive downstream
- Metal / component handling
- Construction
- White goods manufacturing

Code	53-3210
Description	Multi-purpose cut level **C** PU palm coated glove
Gauge	13gg
Colour	Grey liner / Grey coating
Cuff Style	Knit wrist
Length	210-270mm
Sizes	5/2XS - 11/2XL
Packaging	12 pairs/polybag 120 pairs/carton

58 2810

NEW **Multi-purpose** ultra-lightweight cut level **B** PU coated glove

- EN388:2016 level B cut resistance
- Exceptional tactility for precision handling
- Dark colour hides dirt extending life of the glove
- Excellent dry and light oil grip
- Tough and durable PU palm coating

EN388: 2016
3X41B

Applications / Industries

- Intricate Assembly
- Automotive downstream
- Metal / component handling
- Construction
- Logistics
- White goods manufacturing
- Aerospace

Code	58-2810
Description	Multi-purpose ultra-lightweight cut level **B** PU coated glove
Gauge	18gg
Colour	Grey liner / Dark grey coating
Cuff Style	Knit wrist
Length	230-270mm
Sizes	7/S - 11/2XL
Packaging	12 pairs/polybag 120 pairs/carton

58 2220

NEW **Multi-purpose** ultra-lightweight cut level **B** bi-polymer foam coated glove

- EN388:2016 level B cut resistance
- Exceptional fingertip tactility for precision handling
- Tough and durable new bi-polymer foam palm coating
- Reinforced nitrile thumb crotch for added durability in high action area
- Secure dry and oil grip
- 360° breathability

EN388: 2016
4X42B

Applications / Industries

- Intricate Assembly
- Automotive downstream / Aftermarket / Component handling
- Construction
- White goods manufacturing
- Aerospace
- Warehousing

Code	58-2220
Description	Multi-purpose ultra-lightweight cut level **B** bi-polymer foam coated glove
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

+44 (0) 1924 375742

58 3220

NEW **Multi-purpose** ultra-lightweight cut level **C** micro foam coated glove

- EN388:2016 level C cut resistance
- Form fitting liner delivers incredible comfort
- Fantastic tactility for precision tasks and handling
- Micro foam palm coating delivers secure dry and oil grip
- 360° breathability keeping hands cool and dry
- Dirt masking dark colour for longer wear life

EN388: 2016 4X43C

Applications / Industries

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

Code	58-3220
Description	Multi-purpose ultra-lightweight cut level **C** micro foam coated glove
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

58 3710

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

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

EN388: 2016 3X41C

Applications / Industries

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

Code	58-3710
Description	Multi-purpose ultra-lightweight cut level **C** PU coated glove
Gauge	18gg
Colour	Grey liner / Grey coating
Cuff Style	Knit wrist
Length	230-270mm
Sizes	7/S - 11/2XL
Packaging	12 pairs/polybag 120 pairs/carton

High level cut protection

Made using our proprietary Rhino Yarn™ technology produced on site in the UK to deliver the optimum in cut protection, comfort and handling performance.

50 6121

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

The top selling 50-51 range upgraded to level F cut protection

- Rhino Yarn™ cut resistant technology
- Extreme level F cut resistance
- EN407 contact heat level 1
- Thumb crotch is reinforced for additional resilience in high action area
- High level of abrasion resistance and durability
- 360 breathability
- Dark colour hides dirt extending life of the glove
- Undetectable levels of DMF

EN388: 2016 4X43F
EN407: 2004 X1XXXX
RHINOYARN®

Applications / Industries

- Metal fabrication/stamping
- Glass and DGU manufacturing
- Transportation
- Manufacturing
- Construction
- Waste handling / Recycling

Code	50-6121
Description	Medium weight cut level **F** sandy foam nitrile palm coated glove with thumb reinforcement
Gauge	10gg
Colour	Black liner / Black coating
Cuff Style	Knit wrist
Length	230-270mm
Sizes	7/S - 11/2XL
Packaging	12 pairs/polybag 120 pairs/carton

50 6111

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

- Rhino Yarn™ cut resistant technology
- Upgraded level F cut resistance to EN388:2016
- New black thumb crotch reinforced for additional resilience in high action area
- PU Palm coating provides secure dry and light oil grip

EN388: 2016 4X42F

RHINOYARN

Code	50-6111
Description	Medium weight cut level **F** PU palm coated glove with thumb reinforcement
Gauge	10gg
Colour	Black liner / Grey 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
- Metal fabrication / stamping
- Transportation
- Manufacturing
- Construction

50 6130

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

- Rhino Yarn™ cut resistant technology
- Upgraded level F cut resistance to EN388:2016
- High level of abrasion resistance
- Crinkle latex palm coating delivers excellent dry and wet grip
- Durable and heard wearing for heavy duty applications

EN388: 2016 4X42F

RHINOYARN

Code	50-6130
Description	Medium weight cut level **F** latex palm coated glove
Gauge	10gg
Colour	Black liner / Black coating
Cuff Style	Knit wrist
Length	230-270mm
Sizes	7/S - 11/2XL
Packaging	12 pairs/polybag 120 pairs/carton

Applications / Industries

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

53 4110

NEW **Lightweight** cut level **D** PU palm coated glove

- Rhino Yarn™ cut resistant technology
- EN388:2016 level D cut resistance
- Robust and durable PU palm coating
- Excellent dry and light oil grip

EN388: 2016 4X42D

RHINOYARN®

Applications / Industries

- Assembly
- Automotive downstream
- Light metal fabrication
- Transportation
- White goods manufacturing
- Aerospace

Code	53-4110
Description	Lightweight cut level **D** PU palm coated glove
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

53 5420

Medium weight foam nitrile palm coated cut level **E** glove

- Rhino Yarn™ cut resistant technology
- EN388:2016 level E cut resistance
- Excellent dry and oil grip
- Palm coating repels oil and liquids
- Highly breathable liner and coating
- EN407 contact heat level 1

EN388: 2016 4X42E EN407: 2004 X1XXXX

RHINOYARN®

Applications / Industries

- Assembly
- Automotive industry
  Light metal fabrication
- Glass manufacturing
- Construction
- White goods manufacturing

Code	53-5420
Description	Medium weight cut resistant foam nitrile palm coated glove
Gauge	13gg
Colour	Green liner / Black coating
Cuff Style	Knit wrist
Length	230-270mm
Sizes	7/S - 11/2XL
Packaging	12 pairs/polybag 120 pairs/carton

55 5110

Lightweight PU palm coated cut level **E** glove

- Rhino Yarn™ cut resistant technology
- EN388: 2016 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

EN388: 2016 3X43E

RHINOYARN

Code	55-5110
Description	Lightweight cut level E PU palm coated glove
Gauge	15gg
Colour	Black liner / Grey 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
- Transportation
- Aerospace
- White goods manufacturing

55 5120/23

Lightweight micropore foam nitrile coated cut level **E** glove

- Rhino Yarn™ cut resistant technology
- EN388: 2016 level E cut resistance
- High level of tactility and dexterity
- Breathable liner and palm coating
- Micropore foam nitrile palm delivers good dry and oil grip
- Flat nitrile full dip provides oil repellency and liquid protection keeping hands dry and comfortable (55-5123)

EN388: 2016 3X43E

RHINOYARN

Code	55-5120/55-5123
Description	Lightweight cut resistant micropore foam nitrile palm coated glove
Gauge	15gg
Colour	Black 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

58 4110

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

- Rhino Yarn™ cut resistant technology
- EN388:2016 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
- Antistatic

EN388: 2016 3X41D

RHINOYARN®

Code	58-4110
Description	Ultra-lightweight 18 gauge cut level **D** PU palm coated glove
Gauge	18gg
Colour	Grey liner / Grey 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 downstream
- Light metal fabrication
- Aerospace
- White goods manufacturing

58 4120

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

- Rhino Yarn™ cut resistant technology
- EN388:2016 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

EN388: 2016 3X41D

RHINOYARN®

Code	58-4120
Description	Ultra-lightweight 18 gauge cut level **D** foam flex palm coated glove
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

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

58
6120

NEW **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 in high action area
- Excellent dry and light oil grip
- Undetectable levels of DMF
- 360 breathability

The impossible, made possible.

EN388: 2016
4X43F

RHINOYARN®

Applications / Industries

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

Code	58-6120
Description	Ultra-lightweight 18 gauge cut level **F** bi-polymer foam palm coated glove
Gauge	18gg
Colour	Black liner / Black coating
Cuff Style	Knit wrist
Length	230-270mm
Sizes	7/S - 11/2XL
Packaging	12 pairs/polybag 120 pairs/carton

+44 (0) 1924 375742

RHINOGUARD™ 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.

49
6220

Mechanics glove with **Rhinoguard™**

- EN388:2016 level E cut resistance
- Rhino Yarn™ cut resistant technology
- EN388: 2016 level 4 puncture resistance
- ASTM F2878-10 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

EN388: 2016
4X44E

RHINOYARN®

Applications / Industries

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

Code	49-6220
Description	Mechanics glove with Rhinoguard™
Gauge	N/A
Colour	Black / Yellow
Cuff Style	Neoprene
Length	230-270mm
Sizes	8/M - 11/2XL
Packaging	36 pairs/carton, pair packed

+44 (0) 1924 375742

49 5410

Rhinoguard™ arm guard

- Rhino Yarn™ cut resistant technology
- Extreme EN388:2016 level F cut resistance
- EN388: 2016 level 4 puncture resistance
- ASTM F2878-10 hypodermic needle test: 5.7 Newtons (Level 2)
- Double width adjustable straps for a secure fit
- Liquid repellent and wipe clean

EN388: 2016 4X44F

RHINOYARN®

Applications / Industries

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

Code	49-5410
Description	Rhinoguard™ arm guard
Gauge	N/A
Colour	Grey
Cuff Style	N/A
Length	9" / 22cm
Sizes	One Size
Packaging	Packed per piece 10 pieces/carton

49 6411

Rhinoguard™ 19" Sleeve

- Rhino Yarn™ cut resistant technology
- Extreme EN388:2016 level F cut resistance
- EN388: 2016 level 4 puncture resistance
- ASTM F2878-10 hypodermic needle test: 5.7 Newtons (Level 2)
- Built in welts to the elbow to ease movement
- Liquid repellent and wipe clean

EN388: 2016 4X44F

RHINOYARN®

Applications / Industries

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

Code	49-6411
Description	Rhinoguard™ 19" sleeve
Gauge	N/A
Colour	Grey
Cuff Style	N/A
Length	19" / 48cm
Sizes	One Size
Packaging	Packed per piece 10 pieces/carton

Food-Safe Cut Resistant Hand Protection

Upgraded range with elevated protection, grip and launderability

The Tilsatec range of antimicrobial, cut resistant food gloves are designed specifically for the food industry. Made in the UK and fully launderable, the antimicrobial properties are engineered to last the lifetime of the gloves and there is a weight and style to suit most food applications.

71
7110

NEW **Lightweight** cut level **F** antimicrobial food safe glove

- EN388:2016 level F (ANSI 105-2016 A7) 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
- New blue colour
- Ambidextrous
- Made in the UK

RHINOYARN®

Code	71-7110
Description	Lightweight cut level **F** antimicrobial food safe glove
Gauge	13gg
Colour	Blue liner
Cuff Style	Knit wrist
Length	255-305mm
Sizes	6/XS - 11/2XL
Packaging	6 pieces/polybag 216 pieces/carton

Applications / Industries

- Vegetable preparation
- Food packaging and processing
- Light duty meat carving and slicing

EN388: 2016
3 X 4 X F

+44 (0) 1924 375742

72 8110

NEW **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
- New blue colour
- Ambidextrous
- Made in the UK

RHINOYARN®

Applications / Industries

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

EN388: 2016 4X4XF

Code	72-8110
Description	Medium weight cut level **F** antimicrobial food safe glove
Gauge	10gg
Colour	Blue liner
Cuff Style	Knit wrist
Length	255-305mm
Sizes	6/XS - 11/2XL
Packaging	6 pieces/polybag 144 pieces/carton

73 9110

NEW **Heavy weight** 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
- New blue colour
- Ambidextrous
- Made in the UK

RHINOYARN®

Applications / Industries

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

EN388: 2016 4X4XF EN407: 2004 X1XXXX

Code	73-9110
Description	Heavyweight cut level **F** antimicrobial food safe glove
Gauge	7gg
Colour	Blue liner
Cuff Style	Knit wrist
Length	255-305mm
Sizes	6/XS - 11/2XL
Packaging	6 pieces/polybag 144 pieces/carton

Knitted/Leather Cut Protection

Our range of knitted and leather gloves offer a number of weights and styles, leather configurations and palm coverings to provide enhanced abrasion resistance, heat protection and puncture protection.

11
3328

Hot end gauntlet glove

- Rhino Yarn™ cut resistant technology
- EN388:2016 level 3 cut resistance
- EN407 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

EN388: 2016 2322X
EN407: 2004 X2XXXX
RHINOYARN®

Applications / Industries

- Glass manufacturing
- Hot end operations
- High heat areas requiring some mechanical protection

Code	11-3328
Description	Hot end gauntlet glove
Gauge	7gg
Colour	Black glove / Black cuff
Cuff Style	Canvas gauntlet
Length	420-440mm
Sizes	8/M & 10/XL
Packaging	12 pairs/polybag 36 pairs/carton

37 4523

Heavy duty cut resistant aramid knit glove

- EN388:2016 level D cut resistance
- Durable and long lasting
- EN407 burning behaviour level 4
- EN407 contact heat level 1 protection
- Reinforced thumb crotch for high action areas
- Can be repeat laundered extending product life

EN388: 2016 1X4XD EN407: 2004 41XXXX RHINOYARN

Code	37-4523
Description	Heavy duty cut resistant aramid knit glove
Gauge	7gg
Colour	Yellow
Cuff Style	Knit wrist
Length	230-260mm
Sizes	7/S - 10/XL
Packaging	12 pairs/polybag 96 pairs/carton

Applications / Industries

- Assembly
- Automotive industry
- Metal fabrication / stamping

37 4528

X-Heavy duty cut resistant aramid knit glove

- EN388:2016 level D cut resistance
- Durable and long lasting
- EN407 burning behaviour level 4
- EN407 contact heat level 1 protection
- Reinforced thumb crotch for high action areas
- Can be repeat laundered extending product life

EN388: 2016 1X4XD EN407: 2004 41XXXX RHINOYARN

Code	37-4528
Description	X-Heavy duty cut resistant aramid knit glove
Gauge	7gg
Colour	Yellow
Cuff Style	Knit wrist
Length	220-270mm
Sizes	6/XS - 11/2XL
Packaging	12 pairs/polybag 96 pairs/carton

Applications / Industries

- Assembly
- Automotive industry
- Metal fabrication / stamping

+44 (0) 1924 375742

37 5620

Medium duty cut resistant aramid knit glove

- EN388:2016 level 3 cut resistance
- Durable and long lasting
- EN407 burning behaviour level 4
- EN407 contact heat level 1 protection
- Reinforced thumb crotch for high action areas
- Can be repeat laundered extending product life

EN388: 2016 1 3 4 X X
EN407: 2004 4 1 X X X X
RHINOYARN®

Code	37-5620
Description	Medium duty cut resistant aramid knit glove
Gauge	7gg
Colour	Yellow
Cuff Style	Knit wrist
Length	220-270mm
Sizes	6/XS - 11/XL
Packaging	12 pairs/polybag 96 pairs/carton

Applications / Industries

- Assembly
- Automotive industry
- Metal fabrication / stamping

84 3106

6” cut resistant aramid knit cuff

- EN388:2016 level 3 cut resistance
- Durable and long lasting
- EN407 burning behaviour level 4
- EN407 contact heat level 1 protection
- Can be repeat laundered extending product life

EN388: 2016 1 3 4 X X
EN407: 2004 4 1 X X X X
RHINOYARN®

Code	84-3106
Description	6” cut resistant aramid cuff
Gauge	7gg
Colour	Yellow
Cuff Style	Knit wrist
Length	6” / 15cm
Sizes	One size
Packaging	Packed per piece 216 pieces/carton

Applications / Industries

- Assembly
- Automotive industry
- Metal fabrication / stamping

33
5620/10

Lightweight cut level **E** liner glove

- Rhino Yarn™ cut resistant technology
- EN388:2016 level **E** cut resistance
- High comfort and dexterity
- Ideal as an under glove with a disposable over
- Available with a dot pattern to the palm for enhanced grip

EN388: 2016 2X4XE EN407: 2004 X1XXXX

Code	33-5620/33-5610
Description	Lightweight cut level **E** liner glove (with pvc dotted palm option)
Gauge	13gg
Colour	Green liner
Cuff Style	Knit wrist
Length	230-270mm
Sizes	7/S - 11/2XL
Packaging	12 pairs/polybag 108 pairs/carton

Applications / Industries

- Light assembly
- Metal fabrication
- Aerospace
- White goods manufacturing
- Logistics

37
5622

Medium duty cut level **F** 'loop out' glove with thumb reinforcement

- Rhino Yarn™ cut resistant technology
- EN388: 2016 level F cut resistance
- Loop out construction for extra comfort and durability
- Reinforced thumb crotch
- Ambidextrous

EN388: 2016 2X4XF

Code	37-5622
Description	Medium duty cut level **F** loop out glove
Gauge	7gg
Colour	Green liner
Cuff Style	Knit wrist
Length	220-260mm
Sizes	6/XS - 10/XL
Packaging	12 pairs/polybag 72 pairs/carton

Applications / Industries

- Assembly
- Automotive industry
- Metal fabrication / stamping

37 6620

Medium duty cut level **F** glove

- Rhino Yarn™ cut resistant technology
- EN388:2016 level F cut resistance
- Soft, comfortable seamless liner with good dexterity
- Reinforced thumb crotch for high action area
- Suitable for industrial laundering to extend product life
- Also available with a pvc dot pattern to the palm for enhanced grip

EN388: 2016 2X4XF EN407: 2004 X1XXXX

Code	37-6620
Description	Medium duty cut level **F** glove
Gauge	7gg
Colour	Yellow/grey liner
Cuff Style	Knit wrist
Length	220-270mm
Sizes	6/XS - 11/2XL
Packaging	12 pairs/polybag 96 pairs/carton

Applications / Industries

- Assembly
- Metal fabrication
- Glass industry
- Logistics

37 6630

Medium duty cut level **F** leather palm glove

- Rhino Yarn™ cut resistant technology
- EN388:2016 level F cut resistance
- EN388 level 4 abrasion resistance
- 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

EN388: 2016 4X43F EN407: 2004 X1XXXX

Code	37-6630
Description	Medium duty cut level **F** leather palm glove
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

Applications / Industries

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

33
6631

Lightweight FR backed cut level **F** leather palm glove

- Rhino Yarn™ cut resistant technology
- EN388:2016 level F cut resistance
- EN407 contact heat level 1
- EN388 level 4 puncture resistance
- Leather palm provides oil resistance and good grip
- Flame resistant fabric provides protection from weld spatter to the back of the hand

RHINOYARN

Applications / Industries

- Assembly
- Automotive industry
- Metal fabrication / stamping
- Oil & Gas
- Utilities

EN388: 2016 4X44F EN407: 2004 X1XXXX

Code	33-6631
Description	Lightweight FR backed cut resistant leather glove
Gauge	13gg
Colour	Black fabric / Grey palm
Cuff Style	Knit wrist
Length	230-270mm
Sizes	7/S - 11/2XL
Packaging	12 pairs/polybag 72 pairs/carton

204

Medium duty FR backed cut level **F** leather palm glove

- Rhino Yarn™ cut resistant technology
- EN388:2016 level F cut resistance
- EN407 contact heat level 1
- EN388 level 3 puncture resistance
- Leather palm provides oil resistance and good grip
- Flame resistant fabric provides protection from weld spatter to the back of the hand

RHINOYARN

Applications / Industries

- Assembly
- Automotive industry
- Metal fabrication / stamping
- Oil & Gas
- Utilities

EN388: 2016 4X43F EN407: 2004 X1XXXX

Code	204
Description	Medium duty FR backed cut resistant leather glove
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

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Arm & Body Protection

Many industrial applications such as metal stamping and glass handling require additional protection to the wrist, arm and torso. The Tilsatec range incorporates solutions in various lengths and styles to protect all of these areas.

001

Seamless knitted cut resistant sweatshirt

The **001** sweatshirt is a highly cut resistant garment designed to protect workers in industries such as glass manufacturing, metal fabrication, automotive manufacturing and waste recycling.

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.

- EN388:2016 level E cut resistance
- Rhino Yarn™ cut resistant technology
- Seamless knitted construction for ease of movement
- Full body protection covering major arteries and key vulnerable areas
- Cool touch, lightweight fabric provides maximum user comfort
- High neck design allows safe handling of sheet materials
- Underarm vents for enhanced breathability
- Easy care - wash at up to 40°C and tumble dried
- Made in the UK

EN388: 2016 2X41E

RHINOYARN®

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

Applications / Industries

- Glass industry
- Handling raw glass
- Cutting stations
- Automotive industry
- Metal fabrication / stamping

Code	001
Description	Seamless knitted cut resistant sweatshirt
Gauge	N/A
Colour	Grey
Cuff Style	Knit wrist w/ thumb slot
Length	See size chart
Sizes	S - 2/XL
Packaging	Packed per piece

+44 (0) 1924 375742

81 4121/CK/CV

NEW **Medium weight** cool touch cut level **D** sleeve with comfort cuff (adjustable strap)

- Rhino Yarn™ cut resistant technology
- EN388:2016 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 to top
- Made in the UK

EN388: 2016 3 X 4 X D

RHINOYARN®

Applications / Industries

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

Code	81-4121/CV/CK
Description	Medium weight cool touch cut level **D** sleeve with comfort cuff
Gauge	13gg
Colour	Light Grey
Cuff Style	Comfort cuff with thumb slot
Length	21" / 53cm
Packaging	Packed p/piece 100 pieces p/carton

81 6121/CK/CV

NEW **Medium weight** cool touch cut level **F** sleeve with comfort cuff (adjustable strap)

- Extreme level F cut resistance to EN388:2016
- 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 to top
- Made in the UK

EN388: 2016 3 X 4 X F

RHINOYARN®

Applications / Industries

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

Code	81-6121/CV/CK
Description	Medium weight cool touch cut level **F** sleeve with comfort cuff
Gauge	13gg
Colour	Light Grey
Cuff Style	Comfort cuff with thumb slot
Length	21" / 53cm
Packaging	Packed p/piece 100 pieces p/carton

74
8111

NEW **Medium weight** cut level **F** antimicrobial food safe sleeve

- EN388:2016 level F (ANSI 105-2016 A8) cut resistance
- Inherent antimicrobial component safe for food handling
- New yarn structure (free from glass fibre)
- 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
- Made in the UK

RHINOYARN

Code	74-8111
Description	Medium weight cut level **F** antimicrobial food safe glove
Gauge	10gg
Colour	Blue
Cuff Style	Knit wrist
Length	20"/50cm
Sizes	One Size
Packaging	Packed per piece 100 pieces/carton

Applications / Industries

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

EN388: 2016
4X4XF

84
3420/3520

20" flame retardant cut level **E** sleeve with thumb slot

- EN388:2016 level E cut resistance
- Lightweight and loose fitting
- Inherently flame resistant
- EN407 burning behaviour level 3
- Hook and loop top fastening strap for adjustable fit
- Thumb slot to keep sleeve in place
- Available with a liner for comfort (84-3520)
- Made in the UK

RHINOYARN

Code	84-3420 (Unlined)/84-3520 (Lined)
Description	20" FR cut level **E** sleeve
Gauge	N/A
Colour	Yellow
Cuff Style	Knit wrist with thumb slot
Length	20"/50cm
Sizes	One size
Packaging	Packed per piece 100 pairs/carton

Applications / Industries

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

EN388: 2016
3X41E
EN407: 2004
31XX2X

+44 (0) 1924 375742

85
5110/14/18/21

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

- EN388:2016 level E cut resistance
- Seamless knit with a smooth finish
- Tubular close fitting shape for maximum dexterity
- Thumb slot to keep sleeve in place
- Various finishes and fixings available on request
- Elasticated top to prevent sleeve falling down

EN388: 2016 2X3XE EN407: 2004 X1XXXX RHINOYARN®

Code	85-5110/85-5114/85-5118/85-5121
Description	Cut level E knitted sleeve with thumb slot
Gauge	N/A
Colour	Green
Cuff Style	Knit wrist with thumb slot
Length	10"/25cm 14"/35cm 18"/45cm 21"/53cm
Sizes	One size
Packaging	Packed per piece 100 pieces/carton

Applications / Industries

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

85
5218/21

18"/21" flame retardant cut level **F** sleeve with thumb slot

- EN388:2016 level F cut resistance
- Inherently flame resistant
- Hook and loop top fastening strap for adjustable fit
- Thumb slot to keep sleeve in place
- Various finishes and fixings available on request
- Made in the UK

EN388: 2016 1X4XF EN407: 2004 21XXXX RHINOYARN®

Code	85-5218/85-5221
Description	18" or 21" FR cut level F sleeve with thumb slot
Gauge	N/A
Colour	Green
Cuff Style	Knit wrist with thumb slot
Length	18"/45cm or 21"/53cm
Sizes	One size
Packaging	Packed per piece 100 pieces/carton

Applications / Industries

- Automotive industry
- Metal fabrication / stamping
- Manufacturing

89
5606

8” cut level **F** wrist guard with adjustable straps

- EN388:2016 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
- Made in the UK

EN388: 2016
2 X 4 4 F

RHINOYARN

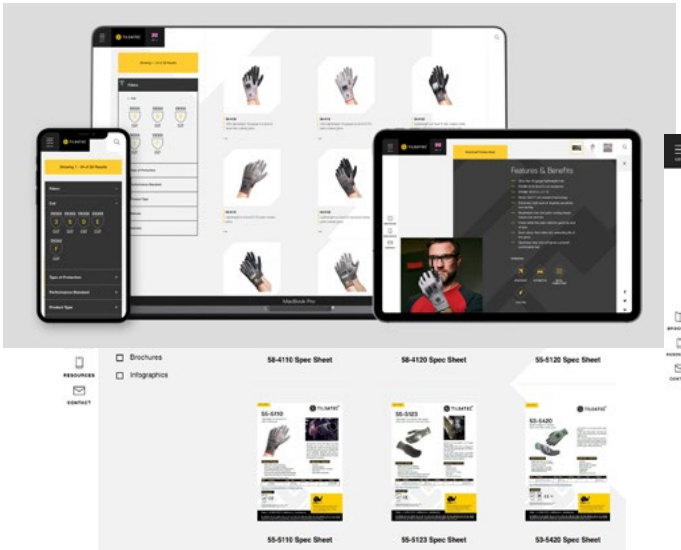
Code	89-5606
Description	8” cut level F wrist guard with adjustable straps
Gauge	N/A
Colour	Black with black straps
Cuff Style	N/A
Length	8”/20cm
Sizes	One size
Packaging	Packed per pair 10 pairs/carton

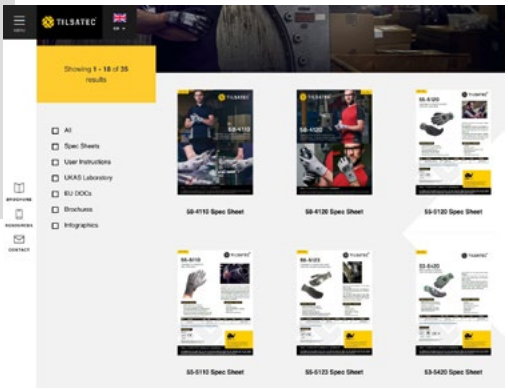
Applications / Industries

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

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.





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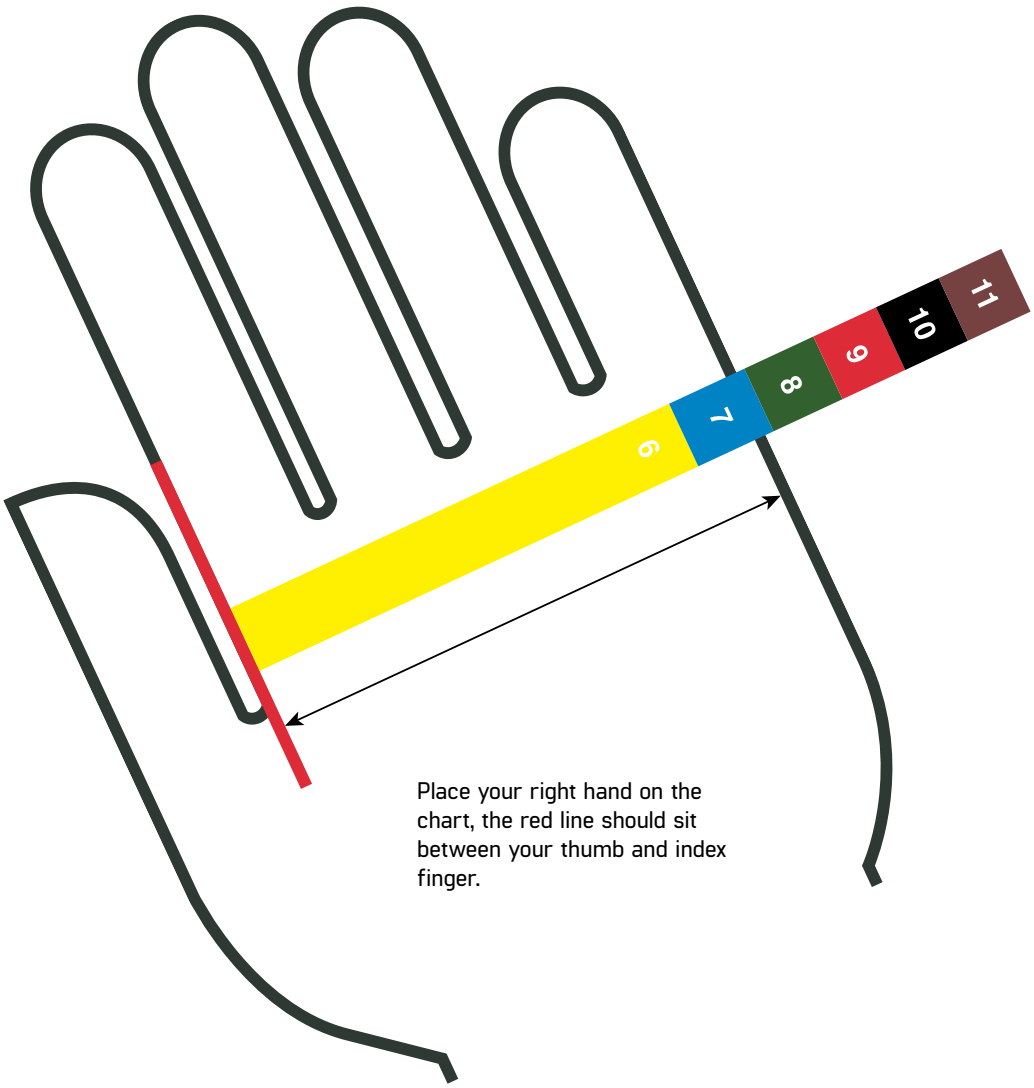
GLOVE SIZING CHART

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.



Sizes are identified by the following cuff colours:

Size	6 X-Small	7 Small	8 Medium	9 Large	10 X-Large	11 2X-Large
Colour coded cuff						

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

tilsatec.com **+**44 1924 375742 info@tilsatec.com
Tilsatec Limited, Flanshaw Lane, Wakefield, West Yorkshire, WF2 9ND, England