TILSATEC®



# Hand protection for **food processing** from the cut resistance specialists

2025

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.

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.



"When our gloves perform at their best, your people can perform at their best."

# Hand and arm protection for food handling

### EC Food Regulations

Tilsatec's food range products are approved for contact in accordance with the parent directive 1935/2004/EC. They also meet the specific requirements outlined in Commission Regulation (EU) No 10/2011 concerning 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.



### EN388:2016+A1:2018 - Mechanical Protection
### 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 forces, measured in newtons, is applied during the test. A graph plotting force against cutting distance is then used to determine the force required to cut through the material over a blade travel of 20mm. 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.

**EN ISO 21420:2020+A1:2024 General requirements for most types of protective gloves 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



### EN407: 2020 -
### Protection from Thermal Hazards

The heat and flame pictogram is shown with six numbers, representing performance levels against specific thermal hazard tests.

**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.




# RhinoYarn® Cut Resistant Technology For The Food Industry

There are a number of different yarns commonly used to provide cut resistance but developing yarns suitable for use in the food industry means we need to deliver high cut protection, food contact safety and prevent contamination of the food stuffs being handled.

A unique set of requirements, we've re-engineered our RhinoYarn® technology to bring you enhanced mechanical protection in our new range of food safe gloves and sleeves. Developed using a composite HPPE yarn structure around a steel core, the range is inherently antimicrobial for the life of the product and provides heightened comfort, grip and dexterity.

## Understanding Glove Gauges

You will likely have come across terminology such as 'gauge' or '13gg' in relation to protective gloves and you may be wondering what it means and why it's important.
Gauge essentially measures the number of stitches used per inch in the knitting process of a glove. With today's manufacturing techniques you will generally come across gloves in 7, 10, 13, 15 and 18 gauge. The 7 gauge glove will be much thicker than an 18 gauge glove however, the lighter gauge glove will actually be denser/more tightly knit. Both have advantages, but it depends on the handling requirements and application involved as to which would be most suitable.
As new engineered fibres and yarns are developed, the knitting gauges we are able to use are increasingly higher to produce thinner, more dexterous gloves without compromising on the level of protection.

## Laundering Instructions For The Tilsatec Food-Safe Range

The gloves can be laundered and tumble dried with no effect on cut resistance or the anti-microbial properties using mild detergents. Do NOT use chlorine bleach, however 'oxygen' bleach can be used in place of chlorine bleach.

# Food Processing Industries

## CUT INJURIES ARE ONE OF THE MOST COMMON RISKS WORKERS FACE IN THE FOOD PROCESSING SUPPLY CHAIN

Tilsatec have designed hand and arm protection solutions delivering high cut and thermal protection with exceptional grip, comfort and durability to meet the needs of most handling applications in the food processing and packaging environments.



**Primary Processing**
Slaughtering
Butchery
Deboning
De-skinning



72-6110 73-9110 74-8111



**Secondary Processing**
Filleting
Trimming
Slicing
Chopping



71-7110 72-6110 74-8111



**Packing**
Raw Ingredient Preparation
Cooking and Preparing
Sandwich Filling
Packing and Labelling



33-6320 71-7110 74-8111



**Distribution**
General Handling
Moving Goods
Equipment Maintenance



53-7121 55-4325 55-1725



# Enhanced Performance

**Tilsatec has raised the bar in cut resistant gloves for food handling with this new range of hand and arm protection. Delivering incredible mechanical performance it has additional features and a yarn construction designed specifically for handling food substances.**

The lightweight 13 gauge **71-7110**, medium weight 10 gauge **72-6110** and 7 gauge **73-9110** heavyweight glove styles are designed and knitted using an innovative blend of steel-reinforced HPPE. 100% manufactured in the UK, free from glass fibre to prevent food contamination, the antimicrobial properties are engineered to last the lifetime of the gloves.

With a weight and style to suit most applications in the meat processing and food packaging industries, the range is compliant with Regulation 10/2011 plastic materials and articles intended to come into contact with food. 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.

# 71-7110

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

CUT F

MADE IN BRITAIN

EN388:2018
3X4XF

CE



- EN388:2016 level F (ANSI 105-2024 A7) cut resistance
- Inherent antimicrobial component safe for food handling
- 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

**Applications / Industries**

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

**Gauge:** 13gg | **Colour:** Blue liner | **Cuff Style:** Knit wrist
**Length:** 270-320mm | **Size:** 6/XS - 11/2XL
**Packaging:** 6 pieces/polybag 216 pieces/carton

RHINOYARN

# 72-6110

**Medium weight** cut level **F**
antimicrobial food safe glove

CUT F

MADE IN BRITAIN

EN388:2018
2X41F

EN407:2020
X1XXXX

CE



- EN388: 2016 level F (ANSI 105-2024 A6) cut resistance
- New yarn structure delivers improved grip
- Permanent antimicrobial component
- Free from glass fibre to prevent product contamination
- 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

**Applications / Industries**

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

**Gauge:** 10gg | **Colour:** Blue liner | **Cuff Style:** Knit wrist
**Length:** 270-320mm | **Size:** 6/XS - 11/2XL
**Packaging:** 6 pieces/polybag 144 pieces/carton

RHINOYARN

# 73-9110

**Heavy weight** cut level **F**
antimicrobial food safe glove

CUT F

MADE IN BRITAIN

EN388:2018
4X4XF

EN407:2020
X1XXXX

CE



- EN388:2016 level F (ANSI 105-2024 A9) cut resistance
- Inherent antimicrobial component safe for food handling
- 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

**Applications / Industries**

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

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

RHINOYARN

# 74-8111

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

CUT F

MADE IN BRITAIN

EN388:2018
4X4XF

CE



- EN388:2016 level F (ANSI 105-2024 A8) cut resistance
- Inherent 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

**Applications / Industries**

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

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

RHINOYARN

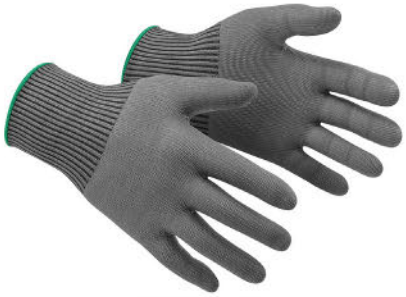
# 33-6320

**Comfort+** mediumweight
cut level **F** liner glove

CUT F

EN388:2018
4X42F

CE



- New non-reinforced RhinoYarn® structure for increased comfort and flexibility for all day wear
- 13 gauge seamless liner free from alloy and mineral yarns
- Available in sizes 6-11
- Tested after washing to industrial standard

**Applications / Industries**

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

**Gauge:** 13gg | **Colour:** Grey liner | **Cuff Style:** Knit wrist
**Length:** 220-270mm | **Size:** 6/XS - 11/2XL
**Packaging:** 12 pairs/paper band. Sizes 6, 7, 11 72 pairs/carton, Sizes 8, 9, 10 120 pairs/carton

RHINOYARN

# 35-4329

**Comfort+** lightweight
cut level **D** liner glove

CUT D

EN388:2018
3X43D

CE



- New non-reinforced RhinoYarn® structure for increased comfort and flexibility for all day wear
- 15 gauge seamless liner free from alloy and mineral yarns
- Available in sizes 5-12
- Tested after washing to industrial standard

**Applications / Industries**

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

**Gauge:** 15gg | **Colour:** Grey liner | **Cuff Style:** Knit wrist
**Length:** 220-270mm | **Size:** 5/XXS - 12/3XL
**Packaging:** 12 pairs/paper band. Sizes 5, 6, 7, 11, 12 72 pairs/carton, Sizes 8, 9, 10 120 pairs/carton

RHINOYARN

# General Handling & Distribution



Workers responsible for packing, palleting and moving food goods for shipping can also be exposed to low level cut hazards and need good wet and dry grip to ensure secure and efficient handling. The Tilsatec multi-purpose range provides abrasion resistance level B-C cut resistance and a degree of liquid protection with all day comfort. Mechanical gloves can also act as a barrier where repeated surface touching is involved.

## 55-4173

Nitrile cut level **D** chemical gauntlet with microfoam palm coating

EN388:2016 4X42D | EN ISO374-5 | EN407:2020 X1XXXX | EN ISO374-1 Type A JKLMNO | CE



except with acidic/fatty foods

- EN374-1:2016+A1:2018 Permeation Type A
- EN374-5:2016 bacteria and fungi
- EN388:2016+A1:2018 level D cut resistance
- EN407: 2020 contact heat level 1
- Incident Indicator - high contrast liner to identify damage to the chemical barrier
- Nitrile microfoam palm dip for improved wet and dry grip
- Under edge size indicator for fast product sizing identification

**Gauge:** 15gg **I** **Colour:** Blue/black
**Cuff Style:** Gauntlet **I** **Length:** 35cm **I** **Size:** 7/S - 11/2XL
**Packaging:** 6 pairs/paper band, 48 pairs/carton

**Applications / Industries**

- Oil & Gas
- Mining
- Heavy machinery
- Manufacturing
- Maintenance
- Waste

## 55-6177

Nitrile cut level **F** chemical gauntlet with microfoam palm coating

EN388:2016 4X42F | EN ISO374-5 | EN407:2020 X1XXXX | EN ISO374-1 Type A JKLMNO | CE



except with acidic/fatty foods

- EN374-1:2016+A1:2018 Permeation Type A
- EN374-5:2016 bacteria and fungi
- EN388:2016+A1:2018 level F cut resistance
- EN407: 2020 contact heat level 1
- Incident Indicator - high contrast liner to identify damage to the chemical barrier
- Nitrile microfoam palm dip for improved wet and dry grip
- Under edge size indicator for fast product sizing identification

**Gauge:** 15gg **I** **Colour:** Grey/black
**Cuff Style:** Gauntlet **I** **Length:** 35cm **I** **Size:** 7/S - 11/2XL
**Packaging:** 6 pairs/paper band, 48 pairs/carton

**Applications / Industries**

- Oil & Gas
- Mining
- Heavy machinery
- Manufacturing
- Maintenance
- Waste

# 55-1725

EnVision cut level **A** glove
with microfoam palm coating

CUT A

EN388:2018
4X42A

CE



except with acidic/fatty foods

- 65% of the glove is made with sustainable materials (incl. coating)
- 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

**Gauge:** 15gg **I Colour:** Navy liner / Black coating
**Cuff Style:** Knit wrist **I Length:** 220-270mm **I Size:** 6/XS - 11/2XL
**Packaging:** 12 pairs/paper band. Sizes 6, 7, 11 / 72 pairs/carton
Sizes 8, 9, 10 / 120 pairs/carton

**Applications / Industries**

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

# 53-7121

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

CUT F

EN388:2018
4X42F

EN407:2020
X1XXXX

CE



except with acidic/fatty foods

- EN388: 2016+A1:2018 level F cut resistance
- New RhinoYarn® 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
- Tested after washing to industrial standards

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

**Applications / Industries**

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

RHINOYARN

# 55-4325

**Comfort+** lightweight cut level **D** glove
with microfoam nitrile palm coating

CUT D

EN388:2018
4X43D

CE



except with acidic/fatty foods

- New non-reinforced RhinoYarn® structure for increased comfort and flexibility for all day wear
- 15 gauge seamless liner free from alloy and mineral yarns
- Microfoam nitrile palm coating delivers ultimate comfort with high tactility and dexterity
- Reinforced thumb for increased durability in high wear
- Touchscreen capable
- Tested after washing to industrial standard

**Gauge:** 15gg **I Colour:** Grey liner/Black coating **I Cuff Style:** Knit wrist
**Length:** 220-270mm **I Size:** 5/XXS - 12/3XL
**Packaging:** 12 pairs/paper band. Sizes 5, 6, 7, 11 72 pairs/carton,
Sizes 8, 9, 10 120 pairs/carton

**Applications / Industries**

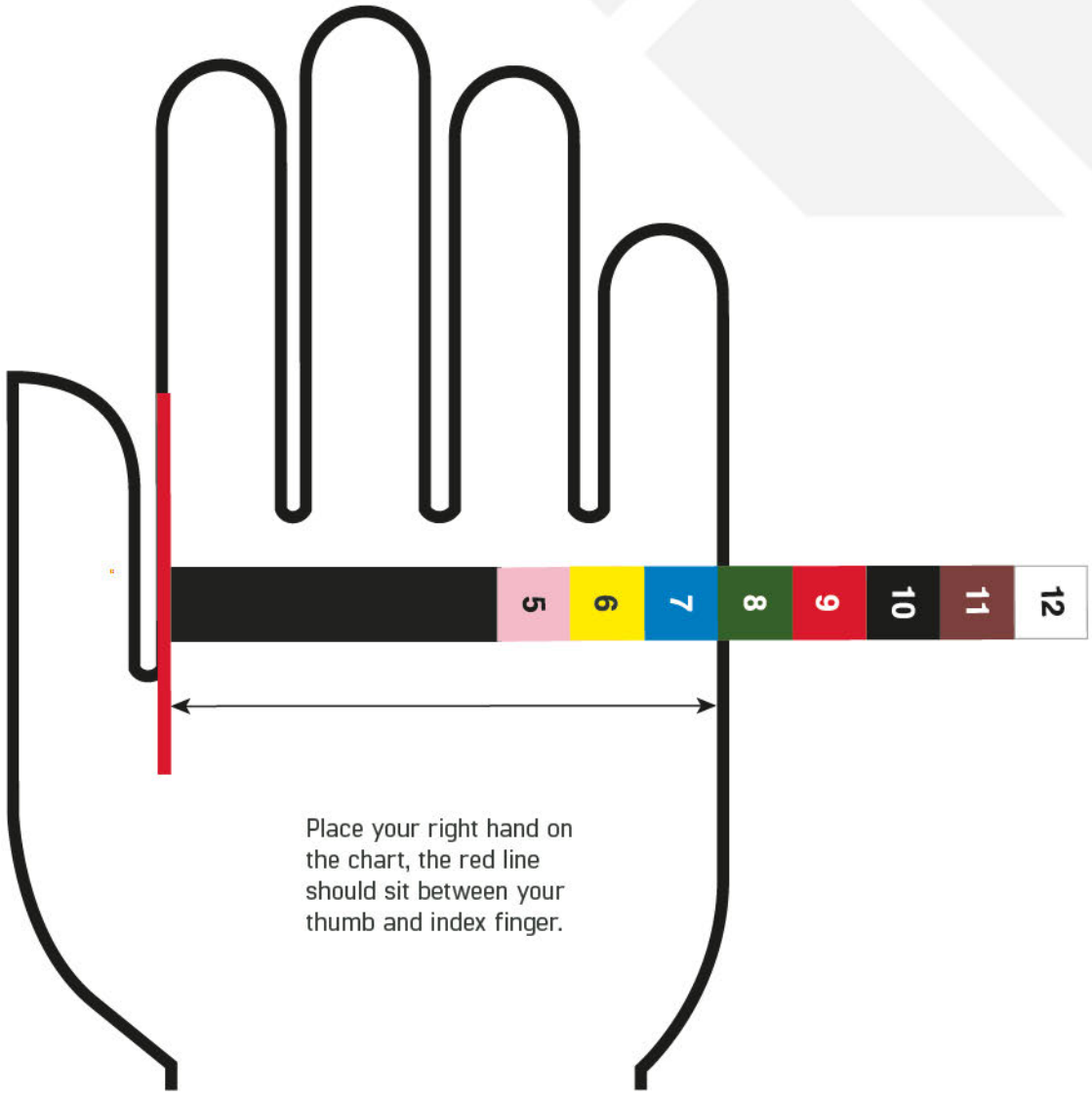
- Assembly
- Automotive industry
- Glass manufacturing
- Metal fabrication / stamping
- Construction
- White goods manufacturing

RHINOYARN

# Glove Sizing Chart

## Cut resistant food gloves

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.




| Size | 5 XX-Small | 6 X-Small | 7 Small | 8 Medium | 9 Large | 10 X-Large | 11 2X-Large | 12 3X-Large |
|---|---|---|---|---|---|---|---|---|
| Colour coded cuff | | | | | | | | |

TILSATEC®

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