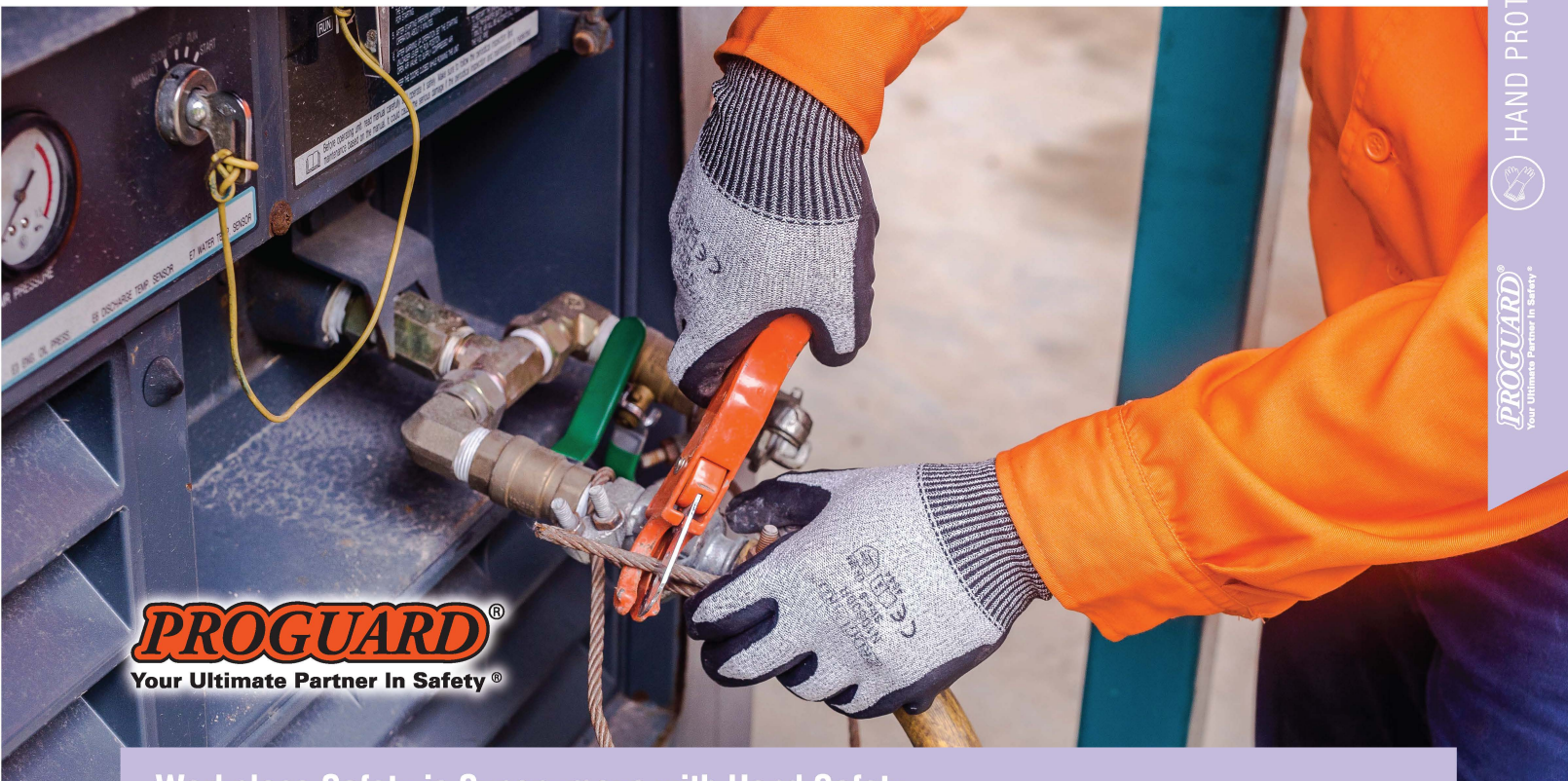


# HAND PROTECTION



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Proguard offers a complete set of hand protection with specific features for different type of applications. Hand protection is necessary to protect the hands from hazards such as sharp objects, chemicals, heat, cold, biocontamination, radioactive contamination, or electric shock. Proguard hand protection also enables user to work more efficiently and comfortably, reducing fatigue, while feeling safe.



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HAND PROTECTION



**PROGUARD**  
Your Ultimate Partner In Safety®

## Workplace Safety is Synonymous with Hand Safety

Hands are one of the biggest tool that a person has, where most activities require actions to be done by hands. Therefore, it shows the importance that we should focus on getting the right glove for the right task at hand. Not only are our gloves served to protect, but there are also some which are food grade certified for food preparation task. Browsing through our catalogue, there are a variety of gloves selection to choose from the many type of EN certified standard found on our gloves.

## Choosing The Correct Gloves

Confused or unsure which gloves would be the best fit for your work environment? Contact our customer service department for us to provide you the best recommendation gloves depending on your needs and job hazard. It is important to evaluate the working area for hazards, potentially dealing with chemicals, cuts, abrasions, or extreme temperatures. There is no single solution to all hazards, but if you assign the right gloves for every job, rest assured knowing that Proguard has taken extra measures to ensure your safety.



## EN 420: 2003 General Requirements for Protective Gloves

You can be assured that each of our products meets and often exceeds the general requirements, construction, comfort, efficiency, and marking.

### DEFINITION

A glove is an item of personal protective equipment that protects the hand or any part of the hand from hazards. It may also cover part of the forearm and arm. Performance levels show how a glove has performed in a specific test and by which the results of that testing may be graded. Level 0 indicates that the glove is either untested or falls below the minimum performance level. Higher numbers indicate higher levels of performance. A performance level X means that the test method is not suitable for the glove sample.

## EN 420: General Requirements on Protective Gloves

This standard defines the general requirements for agronomy, product design, construction, comfort, efficiency and marking.

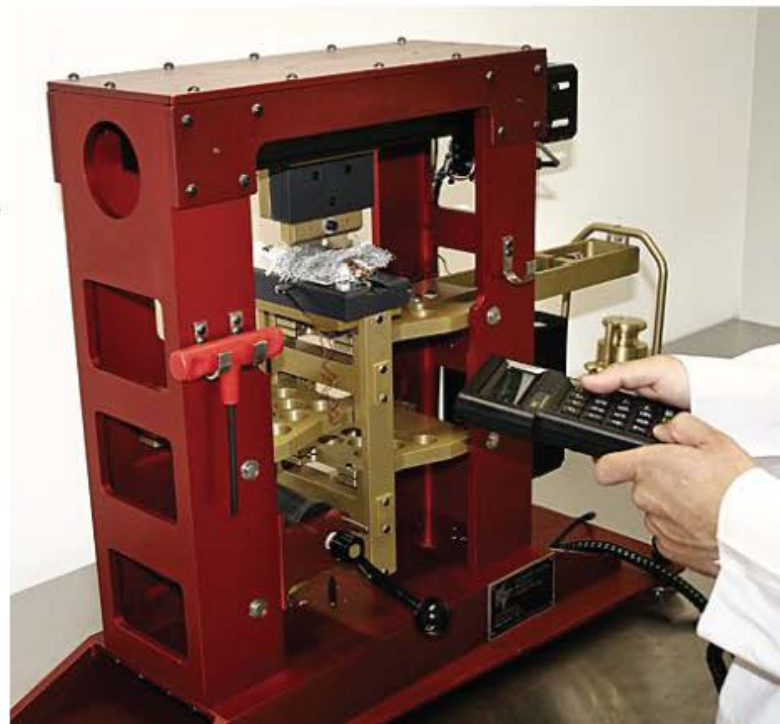
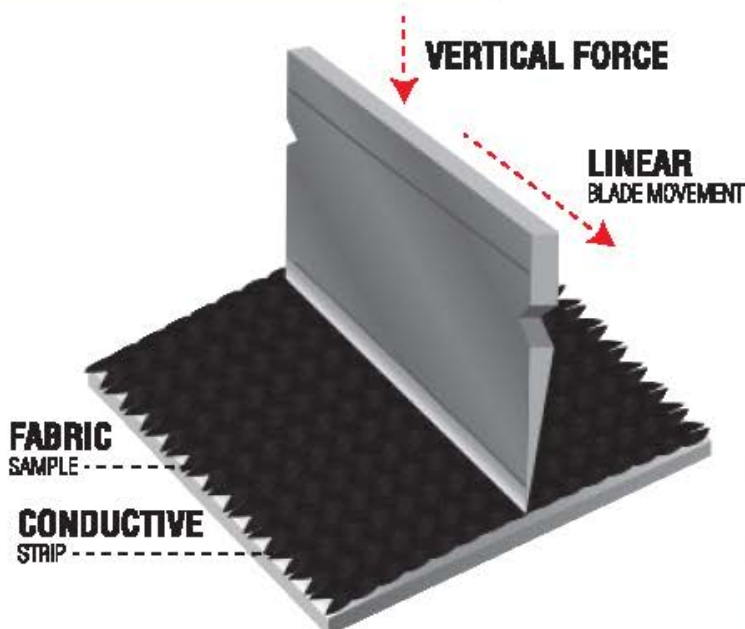
- The glove should not impose a risk and cause injury.
- The pH value of the glove should be as close as possible to neutral.
- The pH value of leather glove must be between 3.5 and 9.5 and the chrome content must be less than 3mg/kg.
- The manufacturer must specify whether the glove contain substances that can cause allergies.
- Sized by reference to an agreed common European hand size.

### Glove Construction and Design

- Gloves have to offer the greatest possible degree of protection in the certain conditions of end use.
- When seams are included, the strength of these seams should not reduce the overall performance of the glove.

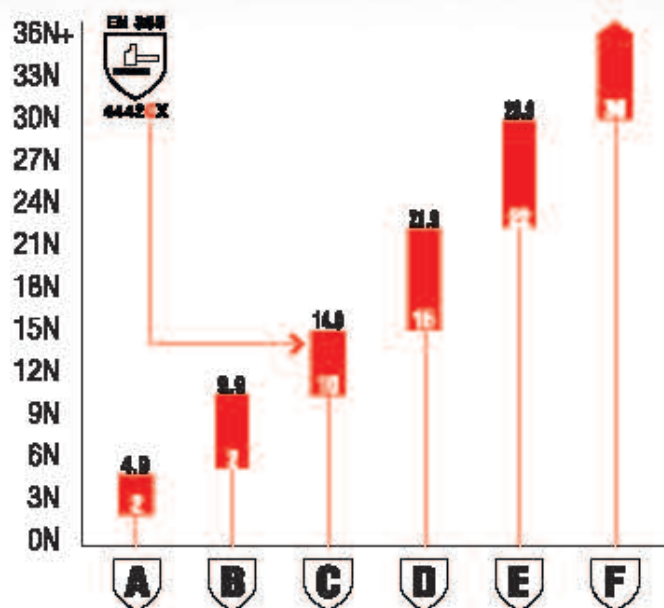
## UNDERSTANDING THE ISO 13997 TEST METHOD

### TDM-100 TEST



## SCALE TO DETERMINE CUT SCORE

### UNDERSTANDING THE ISO 13997 TEST METHOD



EN 388 Rating	Range (newtons)	Converted Range (grams)
A	2-4.9	204 – 508
B	5-9.9	609 – 1,019
C	10-14.9	1,020 – 1,529
D	15-21.9	1,530 – 2,242
E	22-29.9	2,243 – 3,058
F	30+	3,059+

## Glove Sizing Chart

Correct sizing is essential for ensuring glove comfort. The ideal way to determine glove size is with a dressmaker's cloth tape. Use it to measure the circumference of the palm of the hand at its widest point (in mm or in inches). Cross reference that measurement against the table provided here.



Measuring hands in this manner will not account for all possible variations in hand size. For instance, the length of a worker's fingers may be longer or shorter than average. In that case, gloves that are one-half or even a full size larger or smaller than the measured hand size may fit more comfortably.

	XS	S	M	L	XL	XXL
Size	6	7	8	9	10	11
Hand Circumference	152mm	178mm	203mm	228mm	254mm	279mm

## Standard EN388: 2016 Gloves Giving Protection from Mechanical Risks

### Scope

This standard applies to all kinds of protective gloves in respect of physical and mechanical aggressions caused by abrasion, blade cut, puncture and tearing.

### Definitions & Requirements

Protection against mechanical hazards is expressed by a pictogram followed by four numbers (performance levels), each representing test performance against a specific hazard and two letters. The letter in the fifth position corresponds to an ISO Cut Resistance level. A letter "P" in the sixth position is for gloves certified to provide Impact protection.



## EN 388: Mechanical Protection

- Most significant changes will be the acceptance of the ISO 13997 (TDM) cut test method.
- EN 388:2016 cut tests are performed with rotating circular blade.
- The 6 lower cut level will be aligned to the ANSI/ISEA 105 method.
- Reports will be in Newtons, not grams.
- Levels achieved through the use the TDM method will be lettered A through F to avoid confusion with the Coup test method results.
- The Coup test will also amended to take into account the dulling of the blade.
- The abrasive paper will be change.
- The ISO 13997 test method.
- A new impact protection threshold will be added.

### EN 388



abcdef

The 'mechanical risks' pictogram is accompanied by a 6-unit code (a-f).

#### a. Abrasion Resistance

Based on the number of cycles required to abrade through the sample glove.

#### b. Blade Cut Resistance

Based on the number of cycles required to cut through the sample at a constant speed.

#### c. Tear Resistance

Based on the amount of force required to tear the sample.

#### d. Puncture Resistance

Based on the amount of force required to pierce the sample with a standard-sized point.

#### e. ISO Cut Resistance

Based on the force required to cut through a sample using a specified cut test machine (i.e., Tocodynamometer) under specified conditions.

#### 1. EN Impact Protection

Based on the measured transmission of energy and force when the sample experiences a dropped load.

### Performance Level Rating

	1	2	3	4	5
Abrasion Resistance (cycles)	100	500	2000	8000	-
Blade Cut Resistance (number)	1.2	2.5	5.0	10.0	20.0
Tear Resistance (Newtons)	10	25	60	75	-
Puncture Resistance (Newtons)	20	80	100	150	-

	a	b	c	d	e	f
ISO Cut Resistance (Newtons)	2	5	10	15	22	30
EN Impact Protection	Pass (P) or Fail (No Marking)					

Level X can also be applied for a-f above, which means "not tested" or "not applicable".



## Standard prEN ISO 374: 2016 Gloves Giving Protection from Chemicals and Micro-organisms

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### prEN ISO 374-2 Bacteriological Contamination Hazard

Standard against bacterial contamination relates to the resistance to Penetration of glove by microorganisms. This is proven by the glove's water tightness, for example, by an air leakage test. Performance is rate as either pass or fail.

### prEN ISO 374-3: Resistance to Permeation by Chemicals

Things are going up a level, EN374-3 gloves are able to protect you from chemicals. Gloves that reach this standard will be awarded the following symbol:



To earn this symbol, gloves must attain Level 2 in the above EN374-2 test which subjects them to water, as well as achieve the same level when subjected to any three of the following possible test chemicals:

**\*\* Six new chemicals have been added to the list of hazardous compounds:**

	Code Letter	Chemical	CAS Number	Class
OLD	A	Methanol	67-56-1	Primary alcohol
	B	Acetone	67-64-1	Ketone
	C	Acetonitrile	75-05-8	Nitrile compound
	D	Dichloromethane	75-09-2	Chlorinated hydrocarbon
	E	Carbon disulphide	75-15-0	Sulphur containing organic compound
	F	Toluene	108-88-3	Aromatic hydrocarbon
	G	Diethylamine	109-89-7	Amine
	H	Tetrahydrofuran	109-99-9	Heterocyclic and ether compound
	I	Ethyl acetate	141-78-6	Ester
	J	n-Heptane	142-82-5	Saturated hydrocarbon
	K	Sodium hydroxide 40%	1310-73-2	Inorganic base
	L	Sulphuric acid 96%	7664-93-9	Inorganic mineral acid, oxidizing
NEW	M	Nitric acid 65%	7697-37-2	Inorganic mineral acid, oxidizing
	N	Acetic acid 99%	64-19-7	Organic acid
	O	Ammonium hydroxide 25%	1336-21-6	Organic base
	P	Hydrogen peroxide 30%	7722-84-1	Peroxide
	S	Hydrofluoric acid 40%	7664-39-3	Inorganic mineral acid
	T	Formaldehyde 37%	50-00-0	Aldehyde



## HEAT RESISTANT GLOVE



## Heat Resistant Glove

Model:  
KYM/600/1



- 100% Aramid Fabric with 5 finger glove. 2-ply offer effective protection & cut resistance.
- Provides high thermal insulation & lightweight.
- Resistant to temperature up to 250°C or short period of exposure up to 400°C.
- Meets: EN407 42XXXX & EN 388.

Packaging: 1 pair/box

Product Code	Size	Length
KYM/600/1	Free Size	40cm (15.74")



## Heat Resistant Glove

Model:  
ALU/370/5F-PANOX



- Aluminised 5 finger glove with combination of Panox & flame retardant wool fabric.
- Reinforced at the palm provides excellent performance for heat resistance.
- Provides high thermal insulation & mechanical strength.
- Resistant to temperature up to 550°C or short period of exposure up to 850°C.

Packaging: 1 pair/box

Product Code	Size	Length
ALU/370/5F-PANOX	Free Size	40cm (15.74")

## RAZOR CUT RESISTANT SLEEVE / GLOVE

RazorX<sup>SM</sup>

## Cut Resistant Sleeve

Model:  
ST58122



- 13 gauge Razor X5 fiber knitted sleeves provide highest cut resistance, level 5 according to EN388.
- Lightweight construction sleeve for outstanding comfort and durability.
- Application: Appliance manufacturing, light heat application, automotive industry, glass operation, painting, steel manufacturing and handling.

Packaging: 1 pair/polybag, 72 pairs/carton

Product Code	Size	Length
ST58122	Free Size	50cm (19.6")

RazorX<sup>SM</sup>

## Cut Resistant Sleeve

Model:  
ST58122A



- 13 gauge Razor X5 fiber knitted sleeves provide highest cut resistance, level 5 according to EN388.
- Lightweight construction sleeve for outstanding comfort and durability.
- Split leather sewn on sleeves for dexterity and abrasion resistance.
- Application: Appliance manufacturing, light heat application, automotive industry, glass operation, painting, steel manufacturing and handling.

Packaging: 1 pair/polybag, 72 pairs/carton

Product Code	Size	Length
ST58122A	Free Size	37cm (14.5")