

HAND PROTECTION

Designs for Comfort and Protection





HAND PROTECTION GLOVES SELECTION CHART



1 Physical Resistance



2 Chemical Resistance



3 Application (refer to application)



1

Physical resistance categories:
abrasion, cut, puncture and
temperature

Select glove length based on
immersion depth
(refer to material chart)

For product protection:
toughness, fit, thickness &
temperature or disposability



3



2

Check chemical
classification & hazards
(refer to MSDS)

Use chemical
resistance chart

Determine level of protection
1. Physical condition
2. Chemical condition

Select glove material
(refer to material chart)



3



3

Consider features for application:
grip, length, dexterity, comfort,
insulation, type of cuff

Use chemical
resistance chart

Balance between features for
application.

Thinner-gauge:
extra dexterity & tactility.

Heavier-gauge:
greater protection and wear.
Flock-lined for extra comfort,
insulation and wear. Supported for
added cut, snag, puncture or
abrasion resistance.

Determine finish & grip for your
application: rough, smooth,
wrinkle, embossed or bisque, etc.

Select glove length:
Immersed depth? Splash?

Select colour for contamination
identification or work area
designation



WORKSafe® CUT-RESISTANT GLOVES

HPPE/PU CUT-RESISTANT GLOVES

PRODUCT CODE

500WSWGPU2003SX

HPPE gloves, Polyurethane
palm-coat, 13 gauge, Cut Level 3
Size (X): 7/8/9
12prs/bag, 10 bags/case



This glove features a seamless, cut-resistant High Performance Polyethylene (HPPE) shell with a polyurethane palm coat. The gloves are extremely light and comfortable, and provide superior dexterity as well as excellent cut and abrasion resistance.

- Plant maintenance
- Packaging
- Metal sheets & glass handling
- Automotive industries

EN388



4342

NITRILE MICRO-FOAM PALM-COATED 18 GAUGE CUT LEVEL B GLOVES

PRODUCT CODE

510WSWGN300SX

HPPE gloves, Nitrile Micro Foam,
18 gauge, Cut Level B
Size (X): 8/9/10
12prs/bag, 10 bags/case



Developed as a mid-cut risk protection glove with a level B cut resistance (ISO 13997), the High-Performance Polyethylene (HPPE) shell ensures high durability. Featuring a super thin liner (1.1mm thickness) that promises maximum comfort and dexterity for dry environments. The sandy finish on the micro-foam nitrile coating gives users a better grip. The reinforcement between thumb and forefinger improves cut resistance and extends usage lifespan.

- Logistics and warehousing
- Automotive and aerospace industries
- Small components assembly
- Metal fabrication

EN388



4X32B

NITRILE MICRO-FOAM PALM-COATED 13 GAUGE CUT LEVEL C GLOVES

PRODUCT CODE

510WSWGN500SX

HPPE gloves, Nitrile Micro Foam,
13 gauge, Cut Level C
Size (X): 8/9/10
12prs/bag, 10 bags/case



This model provides a high level of cut protection with a level C cut resistance (ISO 13997). Featuring a super thin liner (1.4mm thickness) that promises maximum comfort and dexterity for dry environments. The sandy finish on the micro-foam nitrile coating gives users a better grip. The reinforcement between the thumb and the forefinger improves cut resistance and extends usage lifespan.

- Logistics and warehousing
- Automotive and aerospace industries
- Small components assembly
- Glass manufacturing

EN388



4X42C



WORKSafe® CHEMICAL-RESISTANT GLOVES

NEOCHEM NEOPRENE GLOVES

PRODUCT CODE**510WSWGN29530SX**

Flock-lined neoprene gloves,
Gauge: 30mil, Length: 33cm
Size (X): 7/8/9/10
12prs/bag, 6 bags/case



EN388



3131

EN374-3



AKL

EN374-2



Neoprene gloves provide protection against a wide range of chemicals, including oils, acids, caustics and solvents. These gloves are chemically toughened to increase chemical and abrasion resistance over ordinary neoprene gloves. Designed with curved fingers and contoured palm to enhance flexibility and maximise comfort.

- Handling oils, acids, caustics, alcohols and solvents
- Petrochemicals
- Electronics
- Degreasing
- Refining

NITCHEM NITRILE GLOVES

PRODUCT CODE**510WSWG37715SX**

Flock-lined nitrile gloves,
Gauge: 15mil, Length: 33cm
Size (X): 7/8/9/10
12prs/bag, 12 bags/case



EN388



4101

EN374-3



AKL

EN374-2



Latex-free 100% nitrile content offers an outstanding combination of strength and chemical resistance. Provides superior protection against cuts, snags, abrasions and punctures. Outperforms natural rubber, neoprene and vinyl gloves when exposed to solvents, caustics and animal fats. Curved shaped hand provides a natural fit. Available in flock lining that wicks sweat away from the skin and allows it to be easily put on or removed. Component materials comply with FDA Regulations for food contact.

- Chemical processing
- Food processing
- Aerospace and automotive degreasing
- Oil refining and petrochemicals
- Chemical and glass handling

PETROSOL PVC COTTON-LINED GLOVES

PRODUCT CODE**510WSWGP73**

Green PVC fully coated gloves,
Dipped rough, Cotton liner,
Gauntlet style, Length: 35cm,
Size: Free
12prs/bag, 10 bags/case



EN388



3121

EN374-3



AKL

Supported PVC gloves are an economical choice for dealing with various types of chemicals. Their longwearing vinyl coating is abrasion-resistant and the cotton lining eliminates irritating seams. The rugged rough finish of the glove provides grip in oily and greasy conditions.

- Chemical and metal treatment (acid, plating) industry
- Oil refining and petrochemicals industry
- Utilities



WORKSafe® DISPOSABLE GLOVES

SENTOUCH DISPOSABLE VINYL GLOVES (POWDER FREE)

PRODUCT CODE

510WSWG039SX

Disposable Vinyl Gloves, Powder Free

Length: 9"

Size (X): S/M/L/XL

100pcs/bag, 10 bags/case

510WSWG0312SX

Disposable Vinyl Gloves, Powder Free

Length: 12"

Size (X): S/M/L/XL

100pcs/bag, 10 bags/case



An economical material that offers excellent sensitivity and dexterity which helps to minimize contamination. An appropriate alternative in some applications for workers with latex allergies.

- Food processing
- Housekeeping and janitorial
- Laboratory research
- Pharmaceutical manufacturing

9-INCH DISPOSABLE NITRILE GLOVES (POWDER FREE)

PRODUCT CODE

510WSWG37704SX

Disposable Nitrile Gloves, Powder Free

Length: 9"

Size (X): S/M/L/XL

100pcs/box



Latex-free nitrile material offers better puncture and abrasion resistance. With 5.5mil thickness, it provides tactile sensitivity and dexterity. Excellent grip in wet and dry conditions. Better than latex and vinyl.

- Complies with 21CFR 177.2600 for food contact
- In accordance with the requirement of the Plastic Material and Articles in Contact with Food Commission Directive 2002/72/EC
- Food processing
- Laboratory research
- Pharmaceutical manufacturing
- Housekeeping and janitorial
- Assembly of electronics

EN374-1/
Type B



EN374-5



12-INCH DISPOSABLE NITRILE GLOVES (POWDER FREE)

PRODUCT CODE

510WSWG37705SX

Disposable Nitrile glove, Powder Free,

Finger Textured, Length: 12"

Size (X): S/M/L/XL

100pcs/box(90pcs/box for XL)



12-inch disposable nitrile gloves offer even better protection due to its extra length. 6mil thickness provides tactile sensitivity and dexterity. Comfortably soft and free of allergenic latex proteins.

- PPE in accordance with CE Cat III: waterproof protective gloves for chemical hazards
- Medical device in accordance with CE Class I: Examination gloves
- Meets EU Directive 1935/2004 on food contact
- Tested in accordance with EN455 (all parts) on medical gloves for single use

EN374-3



EN374-2





WORKSafe® GENERAL PURPOSE GLOVES

ARGON COWHIDE GLOVES

PRODUCT CODE**520WSWG125YSX**

Cowhide Leather Gloves

Size (X): 9/10/11/12

10prs/bag, 10 bags/case



Full-grain cowhide leather gloves made from A-grade domestic side leather. It offers comfort, dexterity, durability and resists cuts and abrasions. Styled in gauntlet-cut design, these gloves have keystone thumbs to provide a firm fitting and secure fit.

- Argon welding
- Plant maintenance
- Packaging
- Building and construction
- Automotive industries

EN388



2122

ARGON GOATSKIN GLOVES

PRODUCT CODE**520WSWG128NSX**

Natural Goatskin Leather Gloves

Size (X): 9/10/11/12

10prs/bag, 10 bags/case



Premium goatskin leather contains a high lanolin content that enhances comfort and prevents dryness and skin sensitivity. It offers abrasion resistance, durability and dexterity.

- Automotive industries
- General mechanics
- Maintenance
- Applications requiring multipurpose hand protection

EN388



2122

GOATSKIN PREMIUM LEATHER GLOVES

PRODUCT CODE**520WSWG138NSX**Natural Goatskin Leather Gloves
with Nylon Back and Strap

Size (X): M/L/XL

10prs/bag, 10 bags/case



Premium goatskin leather glove contain high lanolin content that enhances comfort, prevent skin sensitivity and dryness. Goatskin leather also offers maximum abrasion resistance, durability and dexterity.

- Plant maintenance
- Packaging
- Construction
- Automotive Industries



WORKSafe® GENERAL PURPOSE GLOVES

GARE PATCH LEATHER WORK GLOVES

PRODUCT CODE

520WSWG22822

Gare Patch Leather Palm with
Striped Cotton Back and Cuff

Size: Free

12prs/bag, 10 bags/case



Premium shoulder split leather with cotton back and cuff, palm lined, wing thumb and strap palm. Reinforced knuckle strap provides additional protection.

- General purpose applications
- Building and construction
- Machinery operations
- Handling cores and casting

EN388



3223

SPLIT LEATHER GLOVES

PRODUCT CODE

520WSWG127SNSX

Split Leather Gloves

Size (X): 10/11/12

10prs/bag, 10 bags/case



Premium split cowhide leather gloves offer comfort, dexterity, durability and resist cuts and abrasions. Styled in gauntlet-cut design, these gloves have keystone thumbs to provide a firm fitting and secure fit.

- Plant maintenance
- Packaging
- Building and construction
- Automotive industries

EN388



4233

SOLVOTRIL NITRILE GLOVES, JERSEY COTTON (KNIT-WRIST)

PRODUCT CODE

510WSWGN186SX

Fully Coated Nitrile Gloves, Jersey
Cotton, Knit-wrist

Size (X): 9/10

12prs/bag, 10 bags/case



A robust NBR supported safety glove with exceptional abrasion, cut and tear resistance. Available with knit-wrist protection. Tough yet flexible, these gloves are ideal for manual tasks involving raw materials.

- Metal processing
- Machine construction
- Wood working
- Transport industry
- Building and construction

EN388



4211



WORKSafe® GENERAL PURPOSE GLOVES

LEATHER WELDING GLOVES

PRODUCT CODE

520WSWG112GS10

Leather Welding Gloves,
Reinforced Palm, Full Seams
Welded, Full Cotton Liner
Size: Free
12prs/bag, 5 bags/case



Specially designed for welders to provide high heat resistance and lasting wear. 13" length, fully lined with a one-piece leather back for optimum insulation comfort. Straight thumbs for greater flexibility.

- Welding and heat applications
- Heavy industry

EN388



4233

EN407



413X4X



SOLVOTRIL NITRILE GLOVES, JERSEY COTTON (SAFETY CUFF)

PRODUCT CODE

510WSWGN196SX

Fully Coated Nitrile Gloves,
Jersey Cotton, Safety Cuff
Size (X): 9/10
12prs/bag, 10 bags/case



A robust NBR supported safety glove with exceptional abrasion, cut and tear resistance. Available with safety cuff wrist protection. Tough yet flexible, these gloves are ideal for manual tasks involving raw materials.

- Metal processing
- Machine construction
- Wood work
- Transport industry
- Building and construction

EN388



4211

RUBBER PALM-COATED GLOVES

PRODUCT CODE

510WSWG1412AESX

Wrinkled-finish Orange Latex
Palm-dipped Gloves,
Cotton/Polyester Shell
Size (X): 9/10
10prs/bag, 12 bags/case



Ergonomic design adds more comfort, enables prolonged usage and avoids hand fatigue. Natural rubber palm with wrinkled finish ensures a secure grip for handling slippery or abrasive objects. Natural rubber inhibits liquid penetration. Available in heavy duty versions.

- Building and construction
- Shipping and transportation
- Deep-sea fishing
- Quarrying
- Gardening
- Glass handling

EN388



2243



WORKSafe® GENERAL PURPOSE GLOVES

NITRILE FOAM SEAMLESS NYLON LINER GLOVES

PRODUCT CODE

510WSWGNF1001SX

Nitrile Foam Seamless Gloves,
Palm-coated, Nylon Liner
Size (X): 8/9
12prs/bag, 10 bags/case



Nitrile palm foam-coated gloves to provide excellent grip in oily condition with excellent abrasion-resistance. Seamless Nylon liner gives an excellent fit and maximum dexterity.

- Automotive industries
- Packing and inspection
- Component assembly

EN388



3121X

NITRILE MICRO-FOAM SEAMLESS NYLON LINER GLOVES

PRODUCT CODE

510WSWGN800SX

Nitrile Micro-foam Seamless
Gloves, Palm-coated, Nylon Liner
Size (X): 7/8/9/10/11



Highly breathable gloves with superior dexterity, it provides a perfect fit for precision handling in dry environments. Nitrile micro-foam palm coating gives the glove an excellent grip and abrasion resistance. Soft and seamless nylon liner adds more comfort, reduces hand fatigue and improves fingertip sensitivity.

- Logistics and warehousing
- Packing and inspection
- Small components assembly
- Maintenance

EN388



4121X

NITRILE MICRO-FOAM SEAMLESS DOTTED NYLON LINER GLOVES

PRODUCT CODE

510WSWGN900SX

Nitrile Micro-foam Seamless
Gloves, PU Flat Dots, Palm-coated,
Nylon Liner
Size (X): 7/8/9/10/11



Enhanced with raised PU dots to increase durability and provides extra cushioning in repetitive applications. Highly breathable with superior dexterity, this glove provides a perfect fit for precision handling in dry environments. Nitrile micro-foam coating gives the glove an excellent grip and abrasion resistance. Soft and seamless nylon liner adds more comfort, reduces hand fatigue and improves fingertip sensitivity.

- Logistics and warehousing
- Packing and inspection
- Small components assembly
- Maintenance

EN388



4121X





WORKSafe® GENERAL PURPOSE GLOVES

PVC PALM PADDED GLOVES

PRODUCT CODE**520WSWGMSL0956TSX**

PVC Palm Padded Gloves

Size (X): S/M/L



PVC palm padded gloves feature an adjustable hook-and-loop cuff for perfect fit and feel. Form-fitting 4-way stretch spandex and neoprene knuckle panel on top of hand for optimal comfort and flexibility. Synthetic leather palm with PVC patches and reinforced thumb saddle provides added durability.

- General mechanics
- Automotive industries
- Material handling
- Manufacturing
- Plant maintenance

EN388



3111X

RED PVC FULLY COATED GLOVE

PRODUCT CODE**510WSWG2953**Red PVC Fully Coated Gloves,
Smooth Finish, Cotton Interlock
Liner, Gauntlet Style, 27mil

Length: 27cm

Size (X): Free

12prs/bag, 10 bags/case



PVC-dipped gauntlet gloves offer a high level of abrasion resistance and good grip properties. These gloves are well suited for general purpose work.

- General purpose applications
- Maintenance and assembly

EN388



4121

FLANNEL GLOVES

PRODUCT CODE**520WSWG4919SX**

Jersey Gloves, Reversible, Knit-wrist

Size (X): 7/8/9

12prs/bag, 25 bags/case



Cotton jersey gloves are breathable and wick sweat away from your hands.

- Light duty work
- General assembly
- Liner for coated gloves



WORKGard® GENERAL PURPOSE GLOVES

POLKADOT GLOVES WITH RED CUFF

PRODUCT CODE

520WGW5519AA

10oz 100% cotton woven gloves with PVC dots, Knit wrist

Size: Free

12prs/bag, 25 bags/case



Combines comfort, breathability and dexterity. PVC dots laminated on to the palm, thumb and index finger for enhanced grip and longer wear.

- Assembly works
- Automotive industries
- Precision works
- Machine and equipment operation
- Shipping and receiving
- Maintenance

COTTON/POLYESTER WORK GLOVES

PRODUCT CODE

520WGW1007219

Cotton/polyester blend string-knit gloves

Size: Free

12prs/bag, 25 bags/case



Economical general purpose cotton gloves that combine comfort, breathability and dexterity.

- Glove liner in frozen/refrigerated areas
- Food processing
- Light duty work

WORKSafe® GLOVE ACCESSORIES

GLOVE CLIPS

PRODUCT CODE

550WSWG5501-OR / RD / YL / BK / GN / BL

WORKSafe® Orange Glove Clip
WORKSafe® Red Glove Clip
WORKSafe® Yellow Glove Clip
WORKSafe® Black Glove Clip
WORKSafe® Green Glove Clip
WORKSafe® Blue Glove Clip

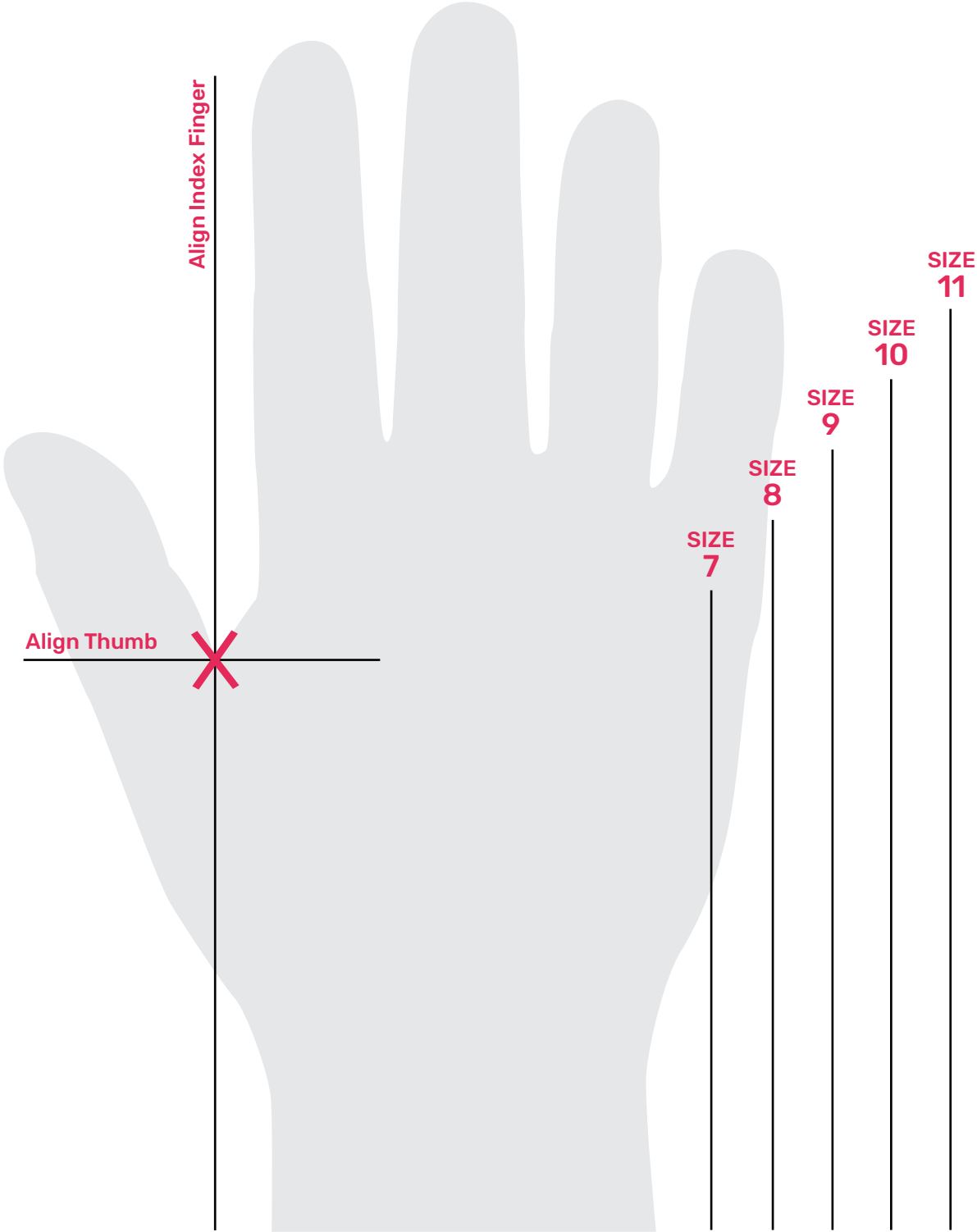


The WORKSafe® Glove Clip is the original and only one with the patented safety breakaway design. It has a proven record of reducing glove loss and hand injuries, giving them a strong return on investment.

- Patented safety breakaway design
- Weighs just 3/4oz (21.26g) and measures 4.5" (11.43cm) long
- To use, simply clip the small end around your belt loop or directly to your clothing and clip the large end to your gloves.



GLOVE SIZING GUIDE





OVERVIEW OF GLOVE MATERIALS

Ideally, the perfect glove should be made of materials that resist all chemicals, provide excellent tactile sensitivity, protect users against all physical hazards with durability. In practice, this is not possible as each material's characteristics react differently to certain working conditions.

OVERVIEW OF SPECIAL GLOVE MATERIALS


Butyl

Viton

Polyurethane

PVA

Chlorosulphonated Polyethylene (CSM)

Superior Resistance Against:	Highly corrosive acids. Excellent for ketones and esters, good resistance to bases, alcohol, amines and amides, glycol ethers, nitro-compounds and aldehydes	Most chemical-resistant of all rubbers against toxic and highly permeating chemicals, eg. PBCs, benzene, aniline and most solvents	Ketonic, organic and aromatic compounds. Good for most solvents like toluene, methanol gasoline, acetone, MEK, etc	Most strong solvents like aromatics, aliphatics and chlorinated solvents	Strong acids and alkalis
Does Not Perform Well With:	Hydrocarbons	Cuts and abrasions	OME, phenol, THF, acids and alkalis	Water- based solutions	Organic and aromatic solvents

PHYSICAL RESISTANCE CHART

Material	Abrasion Resistance	Cut Resistance	Flexibility	Heat Resistance	Ozone Resistance	Puncture Resistance	Tear Resistance
Butyl Rubber (Butyl)	F	G	G	E	E	G	G
Chlorinated Polyethylene (CPE)	E	G	G	G	E	G	G
Natural Rubber	E	E	E	F	P	E	E
Nitrile-Butadiene Rubber (NBR)	E	E	E	G	F	E	G
Neoprene	E	E	G	G	F	E	G
Nitrile Rubber (Nitrile)	E	E	E	G	E	G	G
Nitrile Rubber + Polyvinyl Chloride (Nitrile + PVC)	G	G	G	F	E	G	G
Polyethylene	F	F	G	F	F	P	F
Polyurethane	E	G	E	G	G	G	G
Polyvinyl Alcohol (PVA)	F	F	P	G	E	F	G
Polyvinyl Chloride (PVC)	G	P	F	P	E	G	G
Styrene-Butadiene Rubber (SBR)	E	G	G	G	F	F	F
Viton	G	G	G	G	E	G	G
RATING KEY: E = EXCELLENT G = GOOD F = FAIR P = POOR							

Note: Rating are subject to variation depending on formulation, thickness and whether material is supported by fabric.

CHEMICAL RESISTANCE CHART

The chart on the following page shows the degradation of the gloves. Degradation is the reduction in one or more of the physical properties of the material due to chemical contact. Exposed gloves may swell, get harder or softer, stiffen or weaken or become brittle. Degradation-resistance testing of gloves and permeation-resistance testing are essential. Data shown are the result of laboratory tests and are intended to serve only as a guide. No performance warranty is intended or implied. **(refer to next page)**



DEGRADATION RESISTANCE CHART

Chemical	Natural Rubber	Neoprene	Nitrile	Vinyl
Acetaldehyde	G	G	E	G
Acetic acid	E	E	E	E
Acetone	G	G	G	F
Acrylonitrile	P	G	-	F
Ammonium hydroxide (conc.)	G	E	E	E
Aniline	F	G	E	F
Benzaldehyde	F	F	E	G
Benzene	P	F	G	F
Benzyl Chloride (a)	F	P	G	P
Bromine	G	G	-	G
Butane	P	E	-	P
Butyraldehyde	P	G	-	G
Calcium hypochlorite	P	G	G	G
Carbon disulfide	P	P	G	F
Carbon tetrachloride	P	F	G	F
Chlorine	G	G	-	G
Chloroacetone	F	E	-	P
Chloroform (a)	P	F	G	P
Chromic acid	P	F	F	E
Cyclohexane	F	E	-	P
Dibenzyl ether	F	G	-	P
Dibutyl phthalate	F	G	-	P
Diethanolamine	F	E	-	E
Diethyl ether	F	G	E	P
Dimethyl Sulfoxide (b)	-	-	-	-
Ethyl acetate	F	G	G	F
Ethylene dichloride (a)	P	F	G	P
Ethylene glycol	G	G	E	E
Ethylene trichloride (a)	P	P	-	P
Fluorine	G	G	-	G
Formaldehyde	G	E	E	E
Formic acid	G	E	E	E
Glycerol	G	G	E	E
Hexane	P	E	-	P
Hydrobromic acid (40%)	G	E	-	E
Hydrochloric acid (conc.)	G	G	G	E
Hydrofluoric acid (30%)	G	G	G	E
Hydrogen peroxide	G	G	G	E
Iodine	G	G	-	G
Methylamine	G	G	E	E
Methyl cellosolve	F	E	-	P
Methyl chloride (a)	P	E	-	P
Methyl ethyl ketone	F	G	G	P
Monoethanolamine	F	E	-	E
Morpholine	F	E	-	E
Naphthalene (a)	G	G	E	G
Nitric acid (conc.)	P	P	P	G
Perchloric acid	F	G	F	E
Phenol	G	E	-	E
Phosphoric acid	G	E	-	E
Potassium hydroxide (sat.)	G	G	G	E
Propylene dichloride	P	F	-	P
Sodium hydroxide	G	G	G	E
Sodium hypochlorite	G	P	F	G
Sulfuric acid (conc.)	G	G	F	G
Toluene (a)	P	F	G	F
Trichloroethylene (a)	P	F	G	F
Tricresyl phosphate	P	F	-	F
Triethanolamine	F	E	E	E
Trinitrotoluene	P	E	-	P

RATING KEY:

E = EXCELLENT G = GOOD F = FAIR P = POOR



DEGRADATION RESISTANCE CHART

1. Aromatic and halogenated hydrocarbons will attack all types of natural and synthetic glove materials. Should swelling occur, the user should change to fresh gloves and allow the swollen gloves to dry and return to normal.
2. No data on the resistance to dimethyl sulfoxide of natural rubber, neoprene, nitrile rubber, or vinyl materials are available; the manufacturer of the substance recommends the use of butyl rubber gloves.

EN 388 COUPE TEST METHOD VS. EN ISO 13997 TDM CUT TEST METHOD

While EN 388:2003 uses the coupe test method to determine the cut resistance level of the glove, the latest EN 388:2016 introduces a new test method, ISO 13997 to provide a more meaningful result on cut resistance.

Coupe Test Method	VS.	TDM Cut Test Method
Rotating circular blade	Blade used	Straight blade in one direction
Constant load of 5N	Force applied	Range of loads
Cut index - determined by calculating the number of cycles required to cut through the test sample	Score defined by	Newtons - determined by force required to cut through the test sample at 20mm of blade travel
Level 1: Index > 1.2 Level 2 - Index > 2.5 Level 3 - Index > 5.0 Level 4 - Index > 10.0 Level 5 - Index > 20.0	Cut levels	Level A - Force > 2N Level B - Force > 5N Level C - Force > 10N Level D - Force > 15N Level E - Force > 22N Level F - Force > 30N



GLOVE SELECTION

Select Your Gloves by Looking Out for:

THE RIGHT GLOVE!

Select the right glove: identify which hazards you face at work

A GOOD FIT

Select the right fit for better dexterity and comfort

QUALITY ASSURANCE

Check if the gloves meet proper standard and compliance requirements

GLOVE MATERIALS

▶ NATURAL RUBBER (LATEX)

- Puncture, abrasion and cut-resistant
- Protects against mild acids, alcohols, bases and most diluted chemical solutions
- Weak against animal fat, oils and solvents
- Not suitable for latex sensitivity

▶ NITRILE (NBR)

- Protects against acids, bases, oils, solvents, esters, grease and animal fat
- Extended contact with thicker reusable gloves
- Weak against ketones and some organic solvents
- More resistant to snags, punctures, abrasions and cuts
- Suitable for latex sensitivity

▶ NEOPRENE

- General-purpose synthetic rubber
- Protects against acids, bases, alcohols, oils, solvents, esters, peroxides, hydrocarbons, phenols, grease and animal fat
- Extended contact
- Not as good as Nitrile or Latex against abrasions and cuts
- Suitable for latex sensitivity
- Withstands temperature fluctuations

▶ PVC (VINYL)

- Protects against acids, bases, oils, fats, peroxides, amines, petroleum hydrocarbons, alcohol, and glycol ethers
- Weak against most organic solvents
- Highly recommended for citric acid (10% concentration), cyclohexane, ethylene glycol, formaldehyde, formic acid, glycerine, hydrochloric acid (linseed oil, perchloric acid, potassium hydroxide, and tannic acid)
- Excellent abrasion resistance

▶ CUT-RESISTANT MATERIALS: Stainless Steel / Aramid / Leather / UHMWPE / HDPE / HPPE

- Protects against varying degrees of abrasion, cuts and punctures
- Sleeves offer added protection for wrists and arms
- Specialist gloves protect against puncture by hypodermic needles



◆ GLOVE MATERIALS

▶ POLYESTER / COTTON

- Wicks sweat from hands
- Comfortable and soft
- Easily washable

▶ LEATHER

- Tanned animal skin
- Thick and rugged
- Protects against abrasions
- Flexible and breathable

▶ SILVER SHIELD

- Protects against over 280 different chemicals including alcohols, aliphatics, aromatics, chlorines, ketones and esters
- Suitable for extended contact
- Poor fit and dexterity
- Commonly used as a liner glove for additional protection

▶ BUTYL

- Protects against ketones and esters
- Suitable for extended contact
- Weak in handling gasoline and aliphatic, aromatic and halogenated hydrocarbons

▶ VITON

- Protects against chlorinated and aromatic solvents
- Suitable for extended contact
- Weak in handling ketones and organic acids
- Good cut and abrasion resistance



*Note that chemical-resistant gloves are not universally resistant to all chemicals. Different types of chemical-resistant gloves are manufactured from different materials, and hence, are resistant to specific types of chemicals and their concentrations.



Within the European Union (EU), all PPE must comply with the essential requirements of the **PPE 89/686/EEC** directive.

Category 1

Simple: Items for protection against minimal-risk hazards, which can be easily identified by the user. The product and/or packaging must include the appropriate technical files and user information but do not contain pictogram labeling.

Category 2

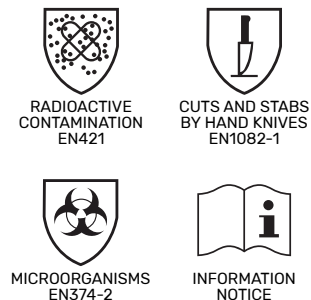
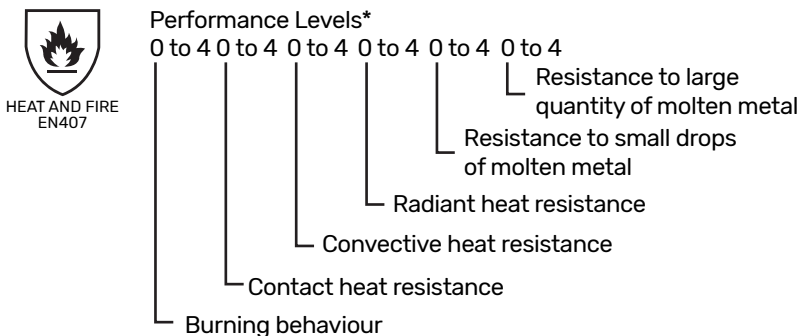
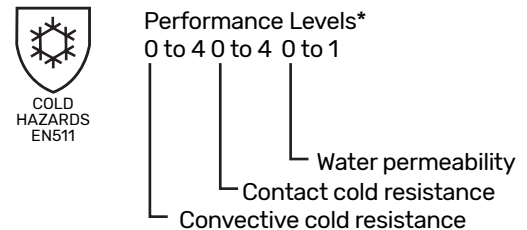
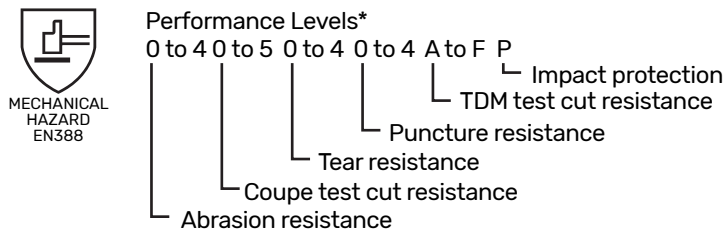
Intermediate: Items that are neither simple nor complex. In addition to the requirements of Category I, Category II gloves undergo independent testing, usually according to a European standard. The product and/or packaging must incorporate the appropriate technical files, user information and pictogram labeling on the glove.

Category 3

Complex: Items that offer protection against life-threatening hazards. In addition to the requirements of Category II, Category III products must be produced under an independently verified quality system or be subjected to periodic batch testing. The product and/or packaging must include the appropriate technical files, user information and pictogram labeling on the glove.

EUROPEAN STANDARDS (EN'S)

All gloves must satisfy the EN 420 General Requirements for gloves. These are the other specific standards:



FOOD SAFE
In compliance with EC Regulation 1935/2004

SELECTION REFERENCE:



Class (x)	Tested at voltage:	Approved for work under voltage:
00	2,500	500
0	5,000	1,000
1	10,000	7,000
2	20,000	17,000
3	30,000	26,500
4	40,000	36,000

Category (Y)	Additional Requirement
A	acid resistance
H	oil resistance
Z	ozone resistance
M	resistance against high mechanical strain
R	resistance against acid, oil, ozone and high mechanical strain
C	resistance against extreme cold

*Level X : the test is not applicable or the glove is not tested.



EN 374-1:2016

Modified standard for chemical protective gloves

The ISO 374:2016 Standard specifies the requirements for protective gloves intended to protect the user against dangerous chemicals. Gloves are tested based on Permeation, Penetration and Degradation.

Gloves are classified as Type A, Type B or Type C based on their performance in the test and the number of chemicals they offer protection from. This table shows what each classification involves:

Increased number of test chemicals:



	Letter code	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

^aThe glove must be tested to a minimum of 3 specific chemicals with a penetration on level 2 (>30min) and waterproof.

Marking of protective gloves:

NEW			OLD	
ISO 374-1:2016/Type A	ISO 374-1:2016/Type B	ISO 374-1:2016/Type C	EN 374:2003	EN 374:2003
JKLMNO	JKL		AKL	

*Updated to EN374:2016 standards.



LATEX ALLERGIES*



Latex Free

What are the types of allergies to latex?

The most severe and rare form of latex allergy is Type I hypersensitivity, which can cause anaphylactic shock, an immediate and potentially fatal reaction. Anaphylactic shock can be provoked in people who are allergic to latex by previous usage of latex in the vicinity. As latex is typically powdered during manufacture, latex proteins present within the latex gloves tend to attach themselves to the powder on the glove. As wearers don and use these gloves, the latex proteins are dispersed into the air along with the powder. When these contaminated powder particles are inhaled by allergic people, a serious reaction might ensue.

The other reaction is a Type IV allergy, or allergic contact dermatitis, in which an allergic person would develop a delayed skin rash with blistering. The less severe irritant contact dermatitis causes dry, itchy, irritated areas on the skin, often on the hands. The irritated areas increase risk of acquiring infections and transmitting them.

People who are at risk of developing allergy to latex:

- Healthcare workers or users with repeated exposure to latex gloves or latex materials
- People who have had multiple surgical procedures
- People with a defect in their bone marrow cells
- Patients who require regular or continuous urinary catheters with a rubber tip
- Spinal surgery patients
- People with eczema
- People suffering from asthma
- People with allergies
- Employees who are involved in distributing or delivering latex products
- People who work in car-tire factories
- Condom users

See a doctor if you suspect you might have a latex allergy

A standard allergy patch test, or a blood test may be ordered to find out if you have an allergy to latex.

Preventive measures

The most effective way to treat latex allergies is to avoid products containing latex. Using powder-free latex gloves will prevent any airborne latex proteins. So if you have latex allergies, use synthetic rubber gloves like nitrile or neoprene gloves. You might wish to recommend that your workplace management switch the hand protection choice to synthetic rubbers.

*The above is adapted from:

Nordqvist, Christian. "What Is A Latex Allergy? What Causes A Latex Allergy?." Medical News Today, MediLexicon, Intl., 27 Jun. 2012. Web. 28 Oct. 2013. <<http://www.medicalnewstoday.com/articles/247168>>



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