



Hand protection

Hand protection

Introduction

Hand and wrist injuries still responsible by far for the majority of injuries to the human body. Therefore North by Honeywell has a complete range of hand protection and is committed to providing workers with the best possible protection against workplace hazards. North's Hand Protection has been designed to provide consistent high quality, good comfort but cost effective protection for a wide variety of applications.

We present general information on how to select the most suitable glove for what kind of application and a list of the different CE-norms is showed. Due to the large number of more than 100 different gloves we can offer one for almost every application. Whether you are protecting the worker or the product, you'll find a North performance engineered glove that will meet your needs. We are doing our utmost to make the selection of the correct North glove as easy as possible.

Regulation starts with European Norm EN420 - General requirements for gloves, which must be met by all protective gloves. It specifies the basic requirements for a glove, such as ergonomics, construction, sizing, marking and user information and guidance.

Protective gloves are separated into three categories according to the risks they are designed to protect against and each category has different marking requirements.

Categories

Risk level	Description	Marking requirements	Glove design
1. Minimum risk category I	Gloves to provide basic protection	Declaration of conformity to EN420 User information CE marking	Simple design
2. Intermediate risk category II	Gloves offer a greater level of protection	EN420 Require tests by an independent and notified body according to the CE specifications	Intermediate design
3. Mortal or irreversible risks category III	Gloves offer protection from irreversible injuries and mortal danger	EN420 Require tests by an independent and notified body according to the CE specifications AND a quality assurance system by either an ISO certified factory or annual testing of samples	Complex design

Pictograms

As indicated gloves of intermediate and complex design require tests by an independent and notified body. The nature of these tests is indicated by the following pictograms. The values achieved according to the standardised EN tests are indicated with numbers, the higher the number, the better the performance. If a test is not applicable, e.g. puncture resistance for knitted gloves, an X is mentioned.

The following pictograms will help you to understand the performance of the North gloves:



This pictogram indicates that the user has to consult the instructions for use.

Symbol	Type of hazard	EN standard
	Mechanical	EN388
	Chemical	EN374.2003
	Chemical	
	Micro-organism	EN374.2003
	Heat and fire	EN407
	Cold	EN511
	Radio-active contamination	EN421
	Ionizing radiation	EN421

EN norms explanation



EN388 Mechanical protection

Protective gloves against mechanical risks

Performance levels		1	2	3	4	5
Abrasion resistance	Cycles	≥ 100	≥ 500	≥ 2000	≥ 8000	-
Cut resistance	Index	≥ 1,2	≥ 2,5	≥ 5	≥ 10	≥ 20
Tear resistance	Newton	≥ 10	≥ 25	≥ 50	≥ 75	-
Puncture resistance	Newton	≥ 20	≥ 60	≥ 100	≥ 150	-



EN 374.2003 Chemical protection and/or micro-organisms

Protective gloves against chemicals and micro-organism

a. Chemical protection

Determination of resistance against chemicals:
As per EN374.2003 a test has to be done for 3 chemicals out of the list of chemicals, and those three need a permeation time of > 30 minutes. The letters of the chemicals chosen are printed below the pictogram.

List of chemicals

Code letter	Chemical	CAS number
A	Methanol	67-56-1
B	Acetone	67-64-1
C	Acetonitrile	75-05-8
D	Dichloromethane	75-09-2
E	Carbon disulphide	75-15-0
F	Toluene	108-88-3
G	Diethylamine	109-89-7
H	Tetrahydrofurane	109-99-9
I	Ethyl acetate	141-78-6
J	n-Heptane	142-85-5
K	Sodium hydroxide 40%	1310-73-2
L	Sulphuric acid 96%	7664-93-8

Performance levels	0	1	2	3	4	5	6
Minutes	< 10	10	30	60	120	240	> 480



b. Low chemical resistance

Liquid proof gloves with minimal protection against chemicals. Gloves in this group did not pass the test described under a.



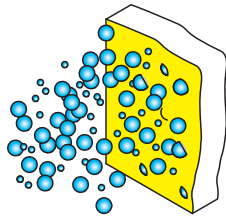
c. Micro-organisms

Determination of resistance to micro-organisms. A glove is micro-organism resistant when it conforms to at least level 2 of the penetration test (AQL level 2).

EN norms explanation

Penetration

Chemical penetration is the movement of a chemical and/or micro organism through porous material, seams, pinholes or other imperfections in a protective glove material.



A glove shall not leak when tested to an air and/or water leak test, and shall be tested and inspected in compliance with the Acceptable Quality Level.

Performance level	Acceptable Quality Level Factor
Level 1	less than 4,0 faults
Level 2	less than 1,5 faults
Level 3	less than 0,65 faults

Breakthrough or permeation time

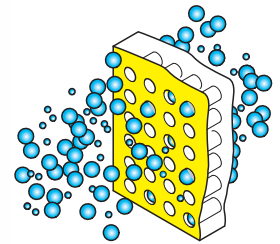
The breakthrough time is the elapsed time between first exposure of the fabric to chemical and the rate of permeation reaching a target value. The target permeation rate for tests according to EN 374-3 is one microgram of chemical passing through each square centimetre of fabric every minute. When measured according to the standard method, the breakthrough time is a value by which the performance of different fabrics can be compared.

Degradation

Degradation is a deleterious change in one or more mechanical properties of a protective glove material due to contact with a chemical.

Permeation

Chemical permeation is a process by which a chemical passes through a polymer by means of molecular diffusion. This occurs without there being any physical holes in the fabric. It is divided into three parts:



- 1) absorption = the process of being soaked on the outer coating
- 2) diffusion = spreading through this coating
- 3) desorption = releasing on the inner coating

Each chemical tested is classified in terms of breakthrough time performance level 0 to 6.

Measured breakthrough time	Protection Index
> 10 minutes	class 1
> 30 minutes	class 2
> 60 minutes	class 3
> 120 minutes	class 4
> 240 minutes	class 5
> 480 minutes	class 6

I Burning behaviour A flame is placed directly below and in line with the glove at an angle of 30° and a distance of 20mm. The glove is tested for each ignition time i.e. 3 seconds and 15 seconds.

II Contact heat Samples are taken from the palm area and placed in contact with a cylinder of the appropriate temperature. To gain the relevant performance level, the temperature of the inside of the glove cannot rise by more than 10°C within the threshold time.

III Convective heat Samples are subjected to the incident heat from a flame, and the heat passing through to the inside of the glove is measured. The time to record a temperature rise of 24°C is the Heat Transfer Index (HTI).

IV Radiant heat The sample is exposed to radiant heat density of 20kW/m² and the time taken for the temperature on the inside of the glove to rise 24°C gives the performance level.

V Resistance to small splashes of molten metal Molten drops from a metal rod melted by exposing the rod to a flame are allowed to fall on the sample. The number of drops required to the raise of temperature on the inside of the glove by 40°C gives the performance level.

VI Resistance to large splashes of molten metal A quantity of molten iron is poured onto the sample, which has a PVC film mounted behind the sample. This film must not show any changes to the surface (such as discrete spots or damage) when the sample is exposed to the quantity of molten iron.

EN 407 Heat and fire protection



Thermal hazards

- I = burning behaviour level (1-4)
- II = contact heat level (1-4)
- III = convection heat level (1-4)
- IV = radiant heat level (1-4)
- V = small amounts of liquid metal (1-4)
- VI = large splashes of liquid metal (1-4)

Performance levels	1	2	3	4
A. Burning behaviour (after flame & after glow time)	< 20 s no requir	< 10 s < 120 s	< 3 s < 25 s	< 2 s < 5 s
B. Contact heat (contact temperature & threshold time)	100°C > 15 s	250°C > 15 s	350°C > 15 s	500°C > 15 s
C. Convective heat (heat transfer delay)	> 4 s	> 7 s	> 10 s	> 18 s
D. Radiant heat (heat transfer delay)	> 5 s	> 30 s	> 90 s	> 150 s
E. Small splashes of liquid metal (# drops)	> 5	> 15	> 25	> 35
F. Large amounts of liquid metal (mass)	30g	60g	120g	200g

EN norms explanation, symbols & terms



EN511 Cold protection

Resistance to convective cold

based on the thermal insulation properties of the glove which are obtained by measuring the transfer of cold via convection.

Resistance to contact cold

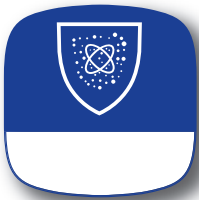
based on the thermal resistance of the glove material when exposed to contact with a cold object.

Permeability by water

0 = water penetration after 30 minutes of exposure;
1 = no water penetration.

Performance levels

	0	1	2	3	4
A. Convective cold thermal insulation ITR in m ² °C/W	I < 0.10	0.10 < I < 0.25	0.15 < I < 0.22	0.22 < I < 0.30	0.30 < I
B. Contact cold thermal resistance R in m ² °C/W	R < 0.025	0.025 < R < 0.050	0.050 < R < 0.100	0.100 < R < 0.150	0.150 < R
C. Water penetration test	fail	pass	-	-	-
Tear: EN level = 1					
Abrasion: EN level = 1					



EN421 Radioactive contamination

Gloves that are tested to protect against radioactive substances.



EN421 Ionizing Radiation

Gloves that are tested to protect against X-ray, Alpha, Beta, Gamma or Neutron radiations.



Coating

Indicates which type of coating material is used.



Packaging

The first number indicates pairs per individual packaging. Second number indicates box quantity.

Interior finishes

- **Powdered**
Helps when putting on and taking off the gloves without increasing thickness
- **Chlorinated**
Powder-free treatment which helps when putting on and taking off the gloves without increasing the thickness. Reduces the risk of allergy from natural latex gloves
- **Flocked**
Cotton based textile fibres on the inside of the gloves. Fleeced feel.
Good absorption of perspiration for extended use

Sanitized™

Known in the UK as Actifresh™. The addition to the latex formulation of the Sanitized compound helps to prevent the build up of bacteria's, as well as fungus inside a glove which has been used or stored in humid conditions. The result is improved skin hygiene, fewer dermal infections and preventing the bad smell usually associated with a used glove.

Glove and coating materials

General purpose and cut resistance glove materials



Dyneema®

- Developed by DSM as a multipurpose high performance polyethylene fiber
- Excellent abrasion and cut resistance
- Being up to 15 times stronger than steel (weight for weight)
- Cool to the touch and comfortable to wear
- Launders well
- Applications where sharp objects are being handled



Dyneema® Licence

North Safety Products is a global DSM Dyneema® licence holder and North Dyneema® gloves come with the assurance that they have been tested and approved by DSM themselves. The guarantee of pure Dyneema® can only come from a licenced manufacturer.



Kevlar®

- Developed by the DuPont company for use in high performance applications
- High resistance to cuts
- Ideal for use in cut resistant gloves for applications where sharp objects are being handled
- High tensile
- Flame resistant



Polyester/Cotton

- Commonly used in string knit gloves because of their comfort and durability
- Excellent laundering characteristics
- Minimum shrinkage
- For mechanical jobs, packaging, maintenance and distribution work



Nylon

- High resistance to abrasion
- Provide a synthetic string-knit glove that is lint free
- Shrinkage is minimal so launders very well

Glove coating materials



Nitrile (NBR)

- Good mechanical properties and resistance to abrasion, cuts, tears and punctures
- Soft and flexible
- Good grip is and can be enhanced further by air-infusing (foaming) the nitrile during dipping, this creates an open surface texture and greater surface area which improves grip on wet or oily objects.



Polyurethane (PU)

- Tough polymers, with best resistance to abrasion, cuts, tears and punctures
- Highly suitable for cut resistant gloves, where its mechanical properties complement those of the high performance fibres
- Good choice for applications such as fine assembly work where a high level of tactility (feel) is important.



Natural Rubber (Latex)

- Good grip and mechanical protection
- Can cause allergic reactions for some individuals



Poly Vinyl Chloride (PVC)

- Exceptional wet and dry grip mechanical properties



Bi-Polymer

- Blend of nitrile and polyurethane
- Great mechanical performance against abrasion, cuts, tears and punctures
- High level of grip and a soft, flexible feel



Double dipped Nitrile

- New technology
- Revolutionary, high grip glove finish. Two stage process that coats the glove in a liquid-proof Nitrile layer, followed by a second nitrile layer that is textured with thousands of microscopic pockets that clear oil and other liquids from a surface and enable a sure and confident grip
- Outperforms foamed finishes in terms of grip
- Provides good resistance to abrasion, cuts, tears and punctures



Anti wet

- New feature for PU gloves so that they can also be used in light oily applications
- A drop of water will stay on the glove, so makes it moisture repellent

Glove materials

Liquid resistant glove materials



Silver Shield® (PE and EVOH Laminate film)

- Exclusive to North Safety Products
- Resist permeation and breakthrough against a wider range of toxic chemicals than any other material
- Ideal against aromatics esters, ketones and chlorines
- Excellent choice for chemical petrochemical laboratories, spill cleanups, hazmat control operations, photo finishing, medical laboratories and a host of other hazardous applications



Butyl

- Exhibits the highest permeation resistance to gas or water vapour of any glove polymer
- Ideal for use in ketones (MEK, MIBK, acetone), esters (tricresyl phosphate, amyl acetate, ethyl acetate) and highly corrosive acids.
- Many applications in industry, and the glove of choice for military, disaster preparedness and hazmat applications



Poly Vinyl Chloride (PVC)

- Resistance to most fats, oils, acids, caustics and petroleum hydrocarbons
- Intended for numerous applications involving incidental exposure to a variety of low level chemical hazards
- Resistant to alcohols and glycol esters, but not aromatics, aldehydes and ketones
- Excellent abrasion resistance
- Applications in many industries, including petrochemical, construction, fishing industry, cold storage etc.



Neoprene

- Protection against acids, alcohols, oils, solvents, esters, grease and animal fats
- Mechanical protection is comparable with latex
- Better resistance to ageing on exposure to sunlight, ozone or weather
- Not recommended for organic solvents
- Ideal for applications in the petrochemical industry

Chemical resistant glove materials



Viton®

- Specifically for handling chlorinated and aromatic solvents
- High degree of impermeability to these solvents can be used in or around water and water-based solutions
- Superior resistance to PCBs used for applications in the automotive and chemical industries as well as aircraft maintenance and degreasing operations



Nitrile (NBR)

- Excellent protection against acids, bases, oils, solvents, esters, grease and animal fats
- Can be used both for supported and unsupported gloves
- More resistant to snags, punctures, abrasions and cuts than Neoprene or PVC contains no natural rubber proteins which can cause allergic reactions
- Has only fair protection against aromatic solvents
- Ideal for use in many applications, laboratories, automotive and aircraft part-handling and assembly, plant cleaning, chemical processing, food processing, petroleum refining, dip tank operations, acid etching, painting, graphic arts, battery manufacturing, degreasing, electronics and pesticide handling



Natural Rubber (Latex)

- Offers good resistance to certain groups of chemicals (such as acids)
- Good resistance to abrasion, cuts, tears and punctures
- Very comfortable and permits excellent dexterity
- Can be an economical alternative to nitrile or neoprene
- A negative aspect of natural rubber is that it contains proteins that can cause allergic reactions, so it is not recommended for everyone
- Natural rubber also will swell and degrade in contact with various animal fats, oils and solvents
- To be used for assembly of small components, cleaning and general maintenance

Find the right glove

What kind of application is the glove meant for?

What kind of protection is required?

The answers can be divided into four groups:

1. Mechanical protection
2. Chemical protection
3. Protection against temperatures
4. Product protection

1. Mechanical protection

Factors to be taken in account are:

- Dexterity
- Comfort
- Grip
- Work efficiency
- Temperatures

Mechanical tests are however not very good to replicate and leave room for interpretation. Therefore test results can only be taken as a guideline. In the application a glove with abrasion level 2 may last longer than a level 4. Therefore trials with North products are crucial.

2. Chemical protection

Questions to be answered:

- What types of chemicals are used in the application and which is the best glove material to protect against it? Without knowing the chemical no recommendation possible.
- What is the concentration?
- How long is the person in contact with the chemical?
- Are other factors involved that might reduce the performance of the glove, like heat, cold, mechanical risk, or other environmental influences? (If mechanical risk is also involved, a supported glove is recommended.)
- What length and thickness is required?
- Should the glove be flock lined?
- Is the colour important to possibly differentiate different departments?

Warning

There is no all round chemical protection. Specific glove materials can protect against specific chemicals for a certain time only. Therefore it is important to know the chemicals that are in use.

To find the test results of a specific chemical please have a look at the chemical resistance guide page 106.

3. Protection against temperatures

Questions to be answered:

- Against what kind of temperature does the gloves have to protect?
- Is there direct contact to the heat, or is the glove used in a hot or cold environment only?
- If it is direct contact, how long is the contact time?
- What other factors are important e.g. grip, sensitivity, liquid proof needed?

4. Product protection

Questions to be answered:

- What type of product has to be protected, food, electronics, computer parts?
- What is the best possible material for the user, the product and for the environment?
- Should it be powdered or powder free? In most of the cases no powder is the better option.
- How clean does the glove have to be?
- Which legal requirements have to be taken into account e.g. for medical applications?

The wide assortment of gloves in this catalogue has been categorized and described in detail to make proper glove selection much easier. The different categories are:

1. General purpose gloves	79
2. Chemical resistance gloves	89
3. Disposable gloves	94
4. Gloves for hot, special and cold applications	95
5. Gloves to be used in controlled environments	98

Seamless knitted & coated gloves

Duro Task



Features and benefits

- Grey cotton/ polyester liner
- Blue rough latex coating for excellent grip also when handling wet objects
- Pre-shaped anatomical hand form for extra comfort.
- Also available in winter version Duro Task Sub Zero. see page 95
- Sanitized treatment

Applications

Various kinds of general purpose applications such as assembly work, construction industry, warehousing, etc.

Art. nr.	Description	Sizes
NF14	Knit wrist, palm coated	7S, 8M, 9L, 10XL, 11XXL

Econo Task



Features and benefits

- Doublure coton/polyester bleue avec enduction latex bleu foncé
- Gant à prix attractif

Applications

For all kind of general purpose applications

Art. nr.	Description	Sizes
NF24	Knit wrist palm coated	8M, 9L, 10XL

Light Task



NF15

Features and benefits

- Soft Nylon liner
- Flexible PU coating
- Excellent fit
- Highest comfort
- Excellent finger sensitivity
- Ideal for handling small objects
- Very good grip in dry applications

Applications

White for a.o. electronics industry, black for more dirty general purpose applications

Art. nr.	Description	Sizes
NF15	White liner, knit wrist, palm coated	6XS-11XXL
NF15B	Black liner, knit wrist, palm coated	7S-11XXL

Seamless knitted & coated gloves

Nitri Task



Features and benefits

- White Nylon liner
- Grey Nitrile coating
- Excellent fit and comfort
- Sanitized treatment
- FDA CFR21 compliant for food contact

Applications

Dry applications, general maintenance work, small parts handling

Art. nr.	Description	Sizes
NF13	White liner, knit wrist, palm coated	7S - 11XXL

Nitri Task Foam



Features and benefits

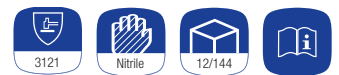
- Grey Nylon liner
- Textured Nitrile foam coating
- Comfortable fit
- Good grip also in oily applications
- Sanitized treatment
- FDA CFR21 compliant for food contact

Applications

Ideal for handling small and oily objects. General maintenance work, light assembly

Art. nr.	Description	Sizes
NFF13	Knit wrist, palm coated	7S, 8M, 9L, 10XL, 11XXL

Nitri Task F2



Features and benefits

- Blue Nylon liner
- Textured black Nitrile foam coating
- Foam porous coating allows the hand to breath
- Excellent fit and dexterity
- Good grip also in wet applications
- The most comfortable general purpose glove
- High work efficiency
- FDA CFR21 compliant for food contact

Applications

All kind of general purpose applications

Art. nr.	Description	Sizes
NFF13H	Knit wrist, palm coated	7S, 8M, 9L, 10XL, 11XXL

Seamless knitted & coated gloves

Oil Grip



Features and benefits

- Green Nylon liner
- New liquid proof soft and flexible double dipped Nitrile coating technology
- Superior grip
- Excellent handling properties due to thin liner
- The liquid proof coating keeps the hands dry and much less grip pressure is needed

Applications

Oily and wet environments

Art. nr.	Description	Sizes
NF35	Knit wrist, palm coated	7S, 8M, 9L, 10XL, 11XXL

Oil Grip FC



Features and benefits

- Seamless liner
- Fully coated
- New liquid proof soft and flexible double dipped Nitrile coating technology
- Superior grip
- Liquid proof coating keeps the hands dry and much less grip pressure is needed

Applications

Heavy oily applications, wet environments

Art. nr.	Description	Sizes
NF35F	Knit wrist, fully coated	7S, 8M, 9L, 10XL, 11XXL

Hiviz



Features and benefits

- Nylon hiviz liner for good visibility
- PVC foam coating
- Good mechanical protection
- Excellent grip also in wet conditions
- High finger sensitivity

Applications

Roadworks, transport, construction where visibility is important

Art. nr.	Description	Sizes
NF11HVY	Knit wrist, palm coated	8M, 9L, 10XL

Cut resistant seamless knitted gloves

Nitri Task KL



Features and benefits

- Kevlar/Lycra liner
- Black sponge Nitrile coating
- Elasticity for perfect comfort, fit and dexterity
- Allround glove for light cut protection
- Sanitized treatment
- FDA CFR21 compliant for food contact

Applications

Good grip in oily environments when handling sharp objects, metal parts or pieces

Art. nr.	Description	Sizes
NFKL13	Knit wrist, palm coated	7S, 8M, 9L, 10XL

Duro Task Plus



Features and benefits

- Yellow Kevlar liner
- Rough blue latex coating
- Excellent grip also when handling wet objects
- High cut protection
- Sanitized treatment

Applications

The ideal glove for glass industry and other high cut risk areas

Art. nr.	Description	Sizes
NFK14	Knit wrist, palm coated	7S, 8M, 9L, 10XL

Light Task Plus 4



Features and benefits

- Nylon/glass fibre liner
- Bi polymer knuckle coating made of PU and Nitrile
- High cut protection
- Good comfort and dexterity

Applications

Handling small and sharp objects

Art. nr.	Description	Sizes
NFG17X	Knit wrist, knuckle coating	7S, 8M, 9L, 10XL, 11XXL

North C5



Features and benefits

- Aramid/steel/polyester liner
- Cut level protection 5
- Uncoated
- Also available in small sizes
- Can also be used as liner under other gloves for extra protection
- FDA CFR21 compliant for food contact

Applications

Machine shops, glass industry, automotive, assembly

Art. nr.	Description	Sizes
62/6805	Knit wrist, uncoated	7S, 8M, 9L, 10XL

Cut resistant seamless knitted gloves

Light Task Plus



Features and benefits

- Grey/white Dyneema liner
- White PU coating
- Good grip and mechanical protection
- Combination of high cut resistance with fit, comfort and dexterity
- FDA CFR21 compliant for food contact

Applications

High work efficiency in cut risk areas such as handling metal, glass, plastics or other sharp objects

Art. nr.	Description	Sizes
NFD16	Knit wrist, palm coated	7S, 8M, 9L, 10XL, 11XXL

Light Task Plus 5



Features and benefits

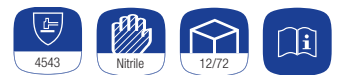
- Dyneema/glass fibre liner
- Grey PU coating
- Highest cut protection (level 5)
- Good finger sensitivity
- Moisture repellent because of anti-wet coating

Applications

Ideal for use in high cut risk general purpose areas that require dexterity and where objects may be slightly oily. Handling small and very sharp objects

Art. nr.	Description	Sizes
NFD20	Knit wrist, palm coated	7S, 8M, 9L, 10XL, 11XXL

Oil Grip NFD35X



Features and benefits

- Dyneema/glass fibre liner
- Black double dipped Nitrile knuckle coating
- Superior grip
- Highest cut protection
- New liquid proof soft and flexible double Nitrile dipped coating technology
- Liquid proof coating keeps the hands dry and much less grip pressure is needed

Applications

General applications that need high cut protection as well as a good grip performance like:

- Handling oily metal sheets or other sharp oily metal objects
- Heavy duty assembly
- Glass industry
- Metal fabrication and handling
- Applications with sharp, oily objects where good grip is needed

Art. nr.	Description	Sizes
NFD35X	Knit wrist, knuckle coating	7S, 8M, 9L, 10XL, 11XXL

Cut resistant seamless knitted gloves

North Kevlar Plus



Features and benefits

- Seamless knitted Kevlar glove
- Light, medium and heavy weight for different levels of cut protection
- FDA CFR21 compliant for food contact

Applications

Fabrication, manufacturing, sharp part handling, metal sheet handling

Art. nr.	Description	EN388	EN407	Sizes
62/6703	Knit wrist Light weight, uncoated	024X	3XXXX	8M, 9L
62/6705	Knit wrist Medium weight, uncoated	134X	X1XXX	8M, 9L
62/6707	Knit wrist Heavy weight, uncoated	144X	X1XXX	8M, 9L

North Kevlar Plus



Features and benefits

- Seamless knitted Kevlar glove
- Extra grip which increases the lifetime of the glove
- Thumb crotch area with special reinforcement for additional protection

Applications

Fabrication, manufacturing, sharp part handling, metal sheet handling

Art. nr.	Description	Size
62/6747	Knit wrist Medium weight, coated	10XL
62/6745	Knit wrist Heavy weight, coated	10XL

North Grip N Kevlar Hot Mill



Features and benefits

- Seamless knitted plated Kevlar glove
- Brown Nitrile "N" coating on both sides
- Ambidextrous design
- Contact heat protection up to 250 degrees
- Heavyweight design for ultimate thermal protection

Applications

Assembly, construction, handling hot and sharp objects.

Art. nr.	Description	Size
52/7456	Knit wrist	10XL

North Kevlar sleeves



Features and benefits

- Seamless knitted double ply Kevlar sleeves
- Wide opening to avoid too much pressure on lower arm
- FDA CFR21 compliant for food contact

Applications

These sleeves are intended for use with cut resistant gloves and are ideally suited to applications where cut hazards to the lower arm are present, such as sheet metal handling, metal fabrication, assembly, automotive.

Art. nr.	Length
SLKW10	10"/25cm
SLKW14	14"/35cm
SLKW18	18"/45cm

Dipped gloves on a cut and sewn liner

Redcote



Features and benefits

- Strong interlock liner
- Tough flexible, smooth red PVC coating
- Good abrasion resistance in dry conditions
- Not liquid proof

Applications

Assembly, general maintenance work, manufacturing

Art. nr.	Description	Sizes
R10	Knit wrist open back	8M, 9L, 10XL
R20	Knit wrist fully coated	9L, 10XL
R30	Gauntlet 10"/27cm	9L, 10XL
R50	Gauntlet 14"/35cm	9L, 10XL
R60	Gauntlet 16"/40cm	9L, 10XL

Superlite Plus



Features and benefits

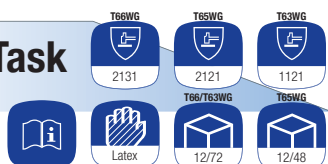
- Interlock liner
- Nitrile coating medium weight
- Snag resistance in combination with sensitivity

Applications

All kind of light assembly work

Art. nr.	Description	Sizes
T4700P	Knit wrist, palm coated	6XS, 7S, 8M, 9L, 10XL
T4700	Knit wrist, fully coated	6XS, 7S, 8M, 9L, 10XL

Grip Task



Features and benefits

- Natural Latex wrinkle finish coating
- Jersey liner
- Excellent grip

Applications

General purpose applications also good grip when handling wet objects

Art. nr.	Description	Sizes
T66WG	Safety cuff	8XL (ladies) 11XXL (men)
T63WG	Knit wrist	8XL (ladies) 11XXL (men)
T65WG	Gauntlet 12"/30cm	11XXL (men)

Bluesafe



Features and benefits

- 100% cotton jersey liner
- Nitrile coating
- Sanitized treatment
- FDA CFR21 compliant for food contact

Applications

Heavy duty general handling situations

Art. nr.	Description	Sizes
T101	Knit wrist palm coated	8M, 9L, 10XL
T102	Knit wrist fully coated	9L, 10XL
T107	Safety cuff palm coated	9L, 10XL
T157	Safety cuff fully coated	9L, 10XL

Bluetuff



Features and benefits

- 100% cotton jersey liner
- Heavy weight Nitrile coating
- Sanitized treatment
- Premium quality
- FDA CFR21 compliant for food contact

Applications

Heavy duty general handling situations

Art. nr.	Description	Sizes
T201	Knit wrist palm coated	8M, 9L, 10XL
T202	Knit wrist fully coated	8M, 9L, 10XL
T207	Safety cuff palm coated	9L, 10XL
T257	Safety cuff fully coated	9L, 10XL
T230	Gauntlet 12"/30cm	9L, 10XL

Cut and sewn general purpose gloves

Worknit HD



85/8721



85/3721



85/3729



85/3422

Features and benefits

- Heavy duty slip on cut and sewn glove
- Nitrile coating withstands abrasion better than most leather palm gloves, yet is flexible
- High comfort jersey cotton liner
- High quality soft Nitrile coating
- Superior cushioning for tough jobs
- Good absorption of perspiration for greater comfort
- Nitrile coating guarantees good grip also when handling wet objects
- All black colour scheme hides dirt

Applications

Outdoor work, maintenance, assembly, grinding and handling abrasives, small part handling

Art. nr.	Description	Sizes
85/8721	Safety cuff black dash back	9L, 10XL
85/3721	Slip on black dash back	8M, 9L, 10XL
85/3729	Slip on cotton striped back	8M, 9L, 10XL, 11XXL
85/3422	Slip on, fully coated	9L, 10XL

Tasknit & Tasknit HD



TP450



T74525

Features and benefits

- Cut and sewn blue Nitrile
- Cotton interlock liner
- Economical alternative to leather gloves

Applications

General purpose

Art. nr.	Description	Sizes
T450	Plain back	8M, 9L, 10XL
TP450	Perforated back	8M, 9L, 10XL
T74525	Safety cuff, black stripe back	8M, 9L, 10XL

Flextask



Features and benefits

- Flexible smooth yellow vinyl impregnated glove
- Inside seams
- Alternative to economical leather gloves

Applications

General purpose handling

Art. nr.	Sizes
T114	8M, 9L, 10XL

Knitted gloves for general purpose applications

Eco Knit



Features and benefits

- Seamless white reversible knit glove
- Made from polyester/cotton
- Knitted wrist to prevent ingress of foreign matters
- Makes an excellent glove liner for liquid proof gloves

Applications
Light assembly, product protection to avoid fingerprints

Art. nr.	Description	Sizes
11RK	Knit wrist	7S, 8M, 9L, 10XL

Tricote




Features and benefits

- Cut and sewn cotton or cotton/polyester
- FDA CFR21 compliant for food contact

Applications
Ideal for inspection, light assembly, sorting and packing

Art. nr.	Description	Sizes
130	100% cotton	7S, 8M, 9L
133	Cotton mix	7S, 8M, 9L, 10XL

Dots Grip



Features and benefits

- Seamless white reversible knit gloves
- Black dots on one or both sides
- Good grip and durability
- Knitted wrist to prevent ingress of foreign matters
- Economy version for price sensitive users

Applications
General maintenance work, light assembly

Art. nr.	Description	Sizes
K211	Dots on one side	7L, 10XL
K311	Dots on both sides	7L, 10XL

Rough Tuff



Features and benefits

- Heavy seamless cotton blend
- Highly resistant latex palm
- Good abrasion in dry and wet conditions
- Knitted wrist to prevent ingress of foreign matters
- Sanitized treatment

Applications
Meets a variety of rugged applications like construction

Art. nr.	Description	Size
T431	Knit wrist palm coated	10XL

Cross Grip




Features and benefits

- Ambidextrous
- Orange Polyester glove
- Criss-cross PVC coating on both sides
- High comfort
- Excellent dry grip

Applications
Assembly, general maintenance

Art. nr.	Description	Size
1216RK	Knit wrist, criss-cross coating	10XL

Grip N PVC



Features and benefits


- White single piece knitted Polyester glove
- Blue PVC "N" pattern on both sides
- Good grip
- Comfort, durability and finger dexterity

Applications
Automotive assembly, general maintenance work, light assembly

Art. nr.	Description	Sizes
K511	Knit wrist, blue N both sides	7L, 10XL

Knitted gloves for general purpose applications

Grizzly Grip



114X PVC 12/144

Features and benefits

- Seamless white polyester/cotton glove
- Blue PVC coating on the palm of the hand
- Excellent fit and comfort
- Good grip in dry applications

Applications
General maintenance, assembly, automotive

Art. nr.	Description	Sizes
K611	Knit wrist	7S, 8M, 9L, 10XL

Eagle Grip



314X PVC 12/144

Features and benefits

- Seamless grey breathable Nylon glove
- Red PVC dots on the palm of the hand
- Excellent fit and comfort
- Good grip

Applications
Perfect allround product for dry applications

Art. nr.	Description	Sizes
K711	Knit wrist	7S, 8M, 9L, 10XL

Smitty



2121 Nitrile 12/144

Features and benefits

- Cotton/polyester shell
- Nitrile coating on the palm, still allows the hand to breath
- Sure grip, good abrasion resistance

Applications
Automotive, general maintenance work, light assembly

Art. nr.	Description	Sizes
81/1162	Knit wrist, palm coated	7S, 10XL

Unsupported gloves for light chemical protection

Latex flocklined



Features and benefits

- 100% natural latex
- T254FL in accordance with FDA regulations
- Curved fingers and contour palm for excellent fit

Applications

Laboratory, food industry, construction, cleaning, pharmaceutical

Art. nr.	Description	Thickness	Length	Sizes
T254FL	Blue	0.45 mm	12"/30cm	7S, 8M, 9L, 10XL
T297FL	Yellow	0.45 mm	12"/30cm	7S, 8M, 9L, 10XL

Latex chlorinated



Features and benefits

- 100% natural latex unflocked
- Curved fingers and diamond pattern for extra grip
- Chlorinated powder free treatment
- Both in accordance with FDA regulations

Applications

Laboratory, food industry, construction, cleaning, pharmaceutical

Art. nr.	Description	Thickness	Length	Sizes
T356	Blue	0.45 mm	12"/30cm	7S, 8M, 9L, 10XL
T394	Natural	0.45 mm	12"/30cm	7S, 8M, 9L, 10XL

Latex heavy weight



Features and benefits

- 100% natural latex, flocklined for extra comfort
- Curved fingers and honey comb pattern for extra grip
- Chlorinated treatment which helps when putting on and taking off the gloves and reduces the risk of allergy
- In accordance with FDA regulations

Applications Laboratory, food industry, construction, cleaning, pharmaceutical

Art. nr.	Description	Thickness	Length	Sizes
T950FL	Black	0.65mm	12"/30cm	7S, 8M, 9L, 10XL

Latex/ Neoprene



Features and benefits

- Neoprene over latex, bi-colour glove
- Chlorinated treatment which helps when putting on and taking off the gloves and reduces the risk of allergy
- In accordance with FDA regulations

Applications

Spray painting, construction, industrial cleaning

Art. nr.	Description	Thickness	Length	Sizes
T224FLC	Blue/yellow	0.70 mm	12"/30cm	7S, 8M, 9L, 10XL

Supported gloves for light chemical protection



Neoprene Plus



Features and benefits

- Neoprene heavy weight glove
- Curved fingers and diamond pattern for enhanced grip
- In accordance with FDA regulations

Applications

Oily and greasy working environments

Art. nr.	Description	Thickness	Length	Sizes
T1119FLC	black	0.75 mm	12"/30cm	7S, 8M, 9L, 10XL



Heavy duty latex



Features and benefits

- 100% latex heavy weight glove
- Rolled cuff
- In accordance with FDA regulations

Applications

Laboratory, food industry, construction, cleaning, pharmaceutical

Art. nr.	Thickness	Length	Sizes
RI504	1.30 mm	18"/45cm	9L, 10XL
RI560	1.30 mm	24"/60cm	10XL



Strongostar



Features and benefits

- PVC glove
- Flocklined for extra comfort
- Lightweight design optimum dexterity and flexibility

Applications

Ideal for use with most light oils and some chemicals

Art. nr.	Thickness	Length	Sizes
T532FL	0.65mm	12.5"/32cm	7S, 8M, 9L, 10XL



Nitri-Guard Plus



Features and benefits

- 100% nitrile liquid proof glove
- Flock lining available for soft pleasant feel which absorbs perspiration
- Curved shaped hand provides a natural fit
- Gloves are free of latex proteins which can cause allergic reactions
- For handling inorganic acids and alkalis as well as fat and oil
- All versions in accordance with FDA regulations

Applications

Chemical and food industry, laboratories, assembly, cleaning and other applications requiring flexibility and dexterity

Art. nr.	Thickness	Length	Sizes
Unflocked			
LA102G	0.28mm (11mil)	33cm	7S, 8M, 9L, 10XL, 11XXL
LA142G	0.38mm (15mil)	33cm	7S, 8M, 9L, 10XL, 11XXL
LA225G	0.56mm (22mil)	38cm	7S, 8M, 9L, 10XL, 11XXL
LA258G	0.63mm (25mil)	45cm	7S, 8M, 9L, 10XL, 11XXL
Flocklined			
LA132G	0.38mm (15mil)	33cm	7S, 8M, 9L, 10XL, 11XXL
LA172G	0.43mm (17mil)	33cm	7S, 8M, 9L, 10XL, 11XXL

Supported gloves



Nitri Knit Plus



Features and benefits

- Liquid proof chemical resistant Nitrile glove
- Seamless interlock liner
- Tough Nitrile coating offers excellent protection against cuts, snags and abrasion
- High comfort
- Good dexterity and grip due to the bisque finish
- Contact heat resistance up to 100 °C
- Silicone free
- In accordance with FDA regulations

Applications

Handling of chemicals, degreasing of parts, industrial cleaning and maintenance e.g. printing industry, tank filling, engine assembly, laboratories, handling of hot liquids or oily and greasy parts, agriculture, handling food, spray painting

Art. nr.	Length	Sizes
NK850	12"/30cm	7S, 8M, 9L, 10XL, 11XXL



Nitri Knit



Features and benefits

- Liquid proof Nitrile glove
- Interlock cotton liner
- Unique textured finish provides good grip handling oily, wet and dry objects
- Good comfort and dexterity
- Tough Nitrile outer layer offers good resistance to cuts, snags and abrasion
- In accordance with FDA regulations

Applications

Perfect chemical resistance against many diluted chemicals, used in automotive assembly and painting, degreasing, food processing, general maintenance work

Art. nr.	Length	Sizes
NK803	12"/30cm	7S, 8M, 9L, 10XL
NK804	14"/35cm	7S, 8M, 9L, 10XL



Neo Task



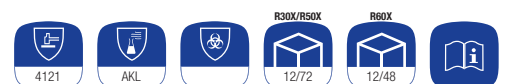
Features and benefits

- Heavy duty Neoprene gloves and gauntlets
- Smooth and rough finish available
- Cotton interlock liner
- Sanitized treatment

Applications

Petrochemical industry

Art. nr.	Length	Coating	Size
T1241	12" 30cm	smooth	11XXL
T1241WG	12"30cm	rough	11XXL
T1441	14"35cm	smooth	11XXL
T1441WG	14"35cm	rough	11XXL
T1841	18"45cm	smooth	11XXL
T1841WG	18"45cm	rough	11XXL



Redcote Plus



Features and benefits

- Liquid proof PVC fully coated glove
- Interlock liner
- Chemical resistance to EN374.2003
- Excellent abrasion resistance
- Sanitized treatment

Applications

Petrochemical, construction and industrial applications

Art. nr.	Length	Sizes
R30X	10"/27cm	9L, 10XL
R50X	14"/35cm	9L, 10XL
R60X	16"/40cm	9L, 10XL

Supported gloves



Strongoflex



Features and benefits

- High quality PVC coated chemical resistance gloves
- Chemical resistance to EN374.2003
- Interlock liner
- Perfect dexterity and flexibility
- REACH compliant

Applications

Petrochemical, construction, industrial applications

Art. nr.	Length	Sizes
6300	10"/27cm	8M, 9L, 9HXL, 10HXXL
6500	14"/35cm	8M, 9L, 9HXL, 10HXXL
6600	16"/40cm	8M, 9L, 9HXL, 10HXXL
6700	18"/45cm	9L, 9HXL, 10HXXL
6900	22"/55cm	9L, 9HXL

ProChem



Features and benefits

- Blue double dipped supported gauntlet
- Seamless knitted liner
- Rough palm improves the grip
- Good abrasion resistance
- Sanitized treatment

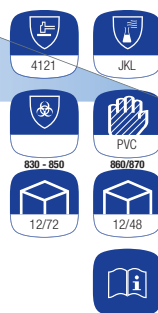
Also available in winter version see page 95

Applications

Perfect in wet working conditions, handling components, also popular in fishing industry, handling oil and greases, petrochemical

Art. nr.	Length	Sizes
T1612WG	12"/30cm	8M, 9L, 10XL, 11XXL

Trawler King



Features and benefits

- Double dipped liquid proof PVC glove
- Jersey liner, rough palm for improved grip
- Good abrasion resistance
- Heavy duty coating

Applications

Ideal for handling greased components, handling oil and greases, public utilities, construction, petrochemical

Art. nr.	Length	Sizes
830FWG	10"/27cm	8M, 9L, 10XL
840FWG	12"/30cm	9L, 10XL
850FWG	14"/35cm	8M, 9L, 10XL
860FWG	16"/40cm	8M, 9L, 10XL
870FWG	18"/45cm	10XL

Deckhand



Features and benefits

- Tough flexible PVC coating
- Seamless interlock liner
- Additional granular coating on hand portion
- Curved hand design provides maximum comfort


Applications

Excellent grip in wet/dry and oil/solvent applications, fishing industry, petrochemical, construction

Art. nr.	Length	Sizes
T1412WG	12"/30cm	8M, 9L, 10XL, 11XXL

Special chemical protection

Butyl



2010 BCI B324/B324R
1/24 1/12

B131



B131R

Features and benefits

- Unsupported gauntlets
- Highly resistant to ketones (MEK, MIBK, Acetone) and Esters (Tricresyl Phosphate, Amyl Acetate, Ethyl Acetate).
- Highest permeation resistance to gas or water vapours
- Flexible and sensitive even at lower temperatures
- Sanitized interior
- Smooth or rough finish available
- Curved finger and hand design provides a better fit for greater comfort

Applications

Aircraft maintenance, automotive, chemical handling and processing, domestic preparedness, laboratories.

Art. nr.	Length	Thickness	Sizes
Smooth finish			
B131	11"/28cm	0,33mm	7S, 8M, 9L, 10XL
B174	14"/35cm	0,43mm	8M, 9L, 10XL
B324	14"/35cm	0,81mm	8M, 9L, 10XL
Rough finish			
B131R	11"/28cm	0,33mm	7S, 8M, 9L, 10XL
B174R	14"/35cm	0,43mm	8M, 9L, 10XL
B324R	14"/35cm	0,81mm	8M, 9L, 10XL

Silvershield



4121 AHL
10/50

Features and benefits

- Five layer PE and EVOH laminate
- Resist to over 280 chemicals
- Economical can be used as a disposable glove, without need of cleaning, recycling
- Ambidextrous design
- Can be used as a secondary inner glove, allows worker maximum protection in heavy duty jobs

Applications

Industry, laboratories, emergency applications where it is not clear with what chemical the user may get in contact with.

Features and benefits


- Five layer PE and EVOH laminate
- Resist to over 280 chemicals
- Economical can be used as a disposable glove, without need of cleaning, recycling
- Ambidextrous design
- Can be used as a secondary inner glove, allows worker maximum protection in heavy duty jobs

Applications

Industry, laboratories, emergency applications where it is not clear with what chemical the user may get in contact with.

Art. nr.	Length	Sizes
SSG	15"/37cm	6XS, 7S, 8M
SSG	16"/40cm	9L, 10XL, 11XXL

Viton



2101 EFL
1/10

Features and benefits

- Unsupported Viton® gauntlets
- Excellent chemical resistance to chlorinated and aromatic solvents
- Can be utilised in or around water based solutions
- Superior resistance to PCB's
- Curved finger and hand design provides better fit for greater comfort

Applications

Chemical industry, laboratories, aircraft maintenance, automotive industry, degreasing operations.

Features and benefits

- Unsupported Viton® gauntlets
- Excellent chemical resistance to chlorinated and aromatic solvents
- Can be utilised in or around water based solutions
- Superior resistance to PCB's
- Curved finger and hand design provides better fit for greater comfort

Applications

Chemical industry, laboratories, aircraft maintenance, automotive industry, degreasing operations.

Art. nr.	Length	Thickness	Sizes
F101	11"/28cm	0.25mm	8M, 9L, 10XL, 11XXL
F124	14"/35cm	0.30mm	9L, 10XL

Disposable gloves

P-Glove



Features and benefits

- High sensitivity polyethylene gloves
- Clear

Applications

Packaging and inspection, catering, meat and fish processing, dairy processing, petrol and cleaning stations

Art. nr.	Description	Length	Size
PGLOVE	Polyethylene	250 mm	L

Viny Task



Features and benefits

- Vinyl examination gloves
- 23cm long with rolled cuff
- Thickness 0.11 mm
- In accordance with FDA regulations

Applications

Handling plexiglass and precious metals, polishing jewels, precision assembly, product inspection and quality control, equipment cleaning, painting, coating

Art. nr.	Description	AQL	Sizes
T525	Powdered	1,5	S, M, L, XL
T525PF	Powder free	1,5	S, M, L, XL

Dexi Task



Features and benefits

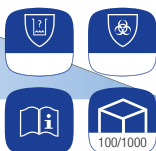
- Nitrile examination glove
- Length 24cm rolled cuff
- High chemical resistance
- 3 times more resistant to puncture than latex or vinyl
- AQL 1,5 for medical applications
- AQL 4,0 for industrial use
- Thickness 0.12mm
- In accordance with FDA regulations

Applications

Food handling, packaging, inspections

Art. nr.	Description	AQL	Sizes
LA049	Powdered	1,5	S, M, L, XL
LA049PF	Powder free	1,5	S, M, L, XL
LA049IND	Powdered	4,0	S, M, L, XL
LA049INDPF	Powder free	4,0	S, M, L, XL

Sensi Task



Features and benefits

- Natural latex examination glove
- Thickness 0,13mm
- Length 23cm with rolled cuff

Applications

Cleanup, electronic assembly, packaging and inspections

Art. nr.	Description	AQL	Sizes
T425	Powdered	1,5	S, M, L, XL
T425PF	Powder free	1,5	S, M, L, XL

ChemSoft



Features and benefits

- Soft thin wall nitrile disposable gloves
- Designed to be flexible and soft
- Thickness 0,10mm
- Can be put over clothing
- Textured fingers and palm for improved grip
- In accordance with FDA regulations
- Also available in cleanroom version CE412W see page 98

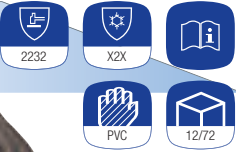
Applications

Electronics, nuclear, packaging and inspections, pharma and chemical industry

Art. nr.	Length	AQL	Sizes
CS042W	12"/30cm	1,5	S, M, L, XL
CS046W	16"/40cm	1,5	S, M, L, XL

Cold applications

Cold Grip



Features and benefits

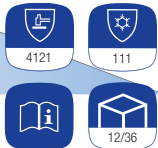
- Seamless knitted and brushed winter liner
- Black foam PVC knuckle coating to provide liquid protection
- Foamed coating to give excellent dry and wet grip
- High flexibility in temperatures below -25°C.
- High dexterity and comfort

Applications

Work in cold conditions, transport, cold storage

Art. nr.	Description	Sizes
NF11HD	Knit wrist, knuckle coating	9L, 10XL, 11XXL

Winter Task



Features and benefits

- Tough flexible PVC coating
- Brushed jersey liner for good insulation
- Non-slip granular coating enhances grip
- 'Liquid resistant

Applications

Work in cold conditions, construction, roadworks, petrochemical, chemical handling

Art. nr.	Description	Size
1802BT	Safety cuff green	10XL
3502BT	Safety cuff orange	10XL

Duro Task Sub Zero



Features and benefits

- Seamless knitted and brushed winter liner
- Latex palm coated for good grip in wet conditions
- High comfort, good fit and dexterity
- Sanitized treatment

Applications

Work in cold conditions, transport, cold storage

Art. nr.	Description	Sizes
NF14HD	Knit wrist, palm coated	8M, 9L, 10XL, 11XXL

Spitfire Winter



Features and benefits

- Tough flexible highly visible glove
- Protection against temperatures as low as -20°C
- Rough sand finish PVC coating for handling wet or oily objects
- Liquid resistant
- Sanitized treatment

Applications

Work in cold conditions, construction, roadworks, railway maintenance or other areas where wearer's visibility is important

Art. nr.	Description	Length	Size
3500FWG	Knit wrist, fully coated		10XL
3501FWG	Gauntlet	11"/30cm	10XL
3514FWG	Gauntlet	14"/35cm	10XL

Pro Chem Boa



Features and benefits

- Blue double dipped supported gauntlet
- Boa winter liner
- Rough palm improves the grip
- Good abrasion resistance
- Sanitized treatment

Applications

Perfect in wet and cold working conditions, handling components, also popular in fishing industry, handling oil and greases, petrochemical

Art. nr.	Description	Length	Sizes
T1612FWG	Gauntlet	12"/30cm	9L, 10XL

Hot applications

Strongo-therm



Heavyweight


 234X
  X34X
  12/144

Lightweight


 124X
  X14X
  12/72

Sleeves


 124X
  X14XXX
  6/48

Features and benefits

- Loop pile cotton gloves, mitts, sleeves
- Lightweight (24oz) and heavyweight (32oz) designs
- For contact heat protection: lightweight 100 °C, heavyweight 250 °C
- In accordance with FDA regulations

Applications

Assembly, cutting operations, handling hot and sharp objects

Art. nr.	Description	Length	Sizes
STR100H	Knit wrist		10XL
STR103H	Canvas cuff	12"/30cm	10XL
STR105H	Canvas cuff	16"/40cm	10XL
STR104H	Terry cloth cuff	12"/30cm	10XL
STR124H	Terry cloth cuff	16"/40cm	10XL
STR100L	Knit wrist		10XL
STR128L	Fingerless mitt		10XL
STR2235L	Sleeves	15"/38cm	
STR2240L	Sleeves	20"/50cm	

Strongotherm Brown

 434X
  X23XXX
 
 12/72
 

Features and benefits






- Mixture of nylon/polyeter/cotton terry cloth glove
- Ambidextrous design
- Contact heat protection up to 250 °C
- Cut protection level 3
- In accordance with FDA regulations

Applications

Assembly, cutting operations, handling hot and sharp objects

Art. nr.	Description	Sizes
STR50	Knit wrist	7S, 8M, 9L, 10XL

North Grip N Hot Mill

 134X
  X241XX
 
 12/72
 

Features and benefits






- Seamless knitted glove
- Double layer of cotton and acrylic yarns
- Brown "N" Nitrile pattern on both sides for excellent grip
- Ambidextrous design
- Contact heat protection up to 250°C
- Heavyweight design for ultimate thermal protection

Applications

Assembly, construction, handling hot objects

Art. nr.	Description	Size
51/7146	Knit wrist	10XL

North Grip N Kevlar Hot Mill

 144X
  X241
 
 12/72
 

Features and benefits

- Seamless knitted plated Kevlar glove
- Brown Nitril "N" coating on both sides
- Ambidextrous design
- Contact heat protection up to 250 °C
- Heavyweight design for ultimate thermal protection

Applications

Assembly, construction, handling hot and sharp objects

Art. nr.	Description	Size
52/7456	Knit wrist	10XL

Kevlar Plus Hot Mill

 254X
  434X1X
 
 6/72
 

Features and benefits

- 100% seamless Kevlar glove
- Cotton liner
- Contact heat protection up to 350 °C
- Excellent cut protection level 5
- In accordance with FDA regulations

Applications

Sheet metal handling, manufacturing, sharp and hot parts handling

Art. nr.	Length	Size
62/8434	14"/34cm	10XL

Finger Cots

Natural Rubber Anti Static



Features and benefits

- Static dissipative quality will not rub or wash off. Cots do not depend on humidity or any ingredient to migrate to the surface. Static dissipative properties will not weaken with age. Consistent performance and high quality.
- Very rapid static decay will not permit build-up of destructive static energy. 5000 to 0 volts in 0.01 second
- Virtually no static build-up on the hand of a grounded person
- Conductive bag can be taken into the immediate work area
- Black colour for easy monitoring of critical ESD production
- Multiple washings make cots powder-free with very low particle count
- In accordance with FDA regulations

Applications

Handling static sensitive components, assemblies and equipment

Art. nr.	Description	Size
115LBR/S	Long, black, rolled powder free	S
125LBR/M	Long, black, rolled powder free	M
135LBR/L	Long, black, rolled powder free	L
145LBR/XL	Long, black, rolled powder free	XL

Natural Rubber



Features and benefits

- Natural rubber finger cots
- Powdered
- Thinnest gauge "tissue cots" for extremely high sensitivity
- Tapered tip is more comfortable and provides better fit
- Available in four sizes for better worker fit and comfort
- In accordance with FDA regulations

Applications

Battery manufacturing, electrical work, food processing, laboratory work, photo processing

Art. nr.	Description	Size
314LWR/S	Long, white, rolled powder free	S
324LWR/M	Long, white, rolled powder free	M
334LWR/L	Long, white, rolled powder free	L
344LWR/XL	Long, white, rolled powder free	XL

Nitrile Anti Static



Features and benefits

- 100% nitrile formulation contains no natural rubber latex proteins that can cause an allergic reaction
- Thickness 0.075 mm provides excellent tactility
- Inherently anti-static and will eliminate damaging static discharge in many applications
- Multiple washed powder-free cots and have low particle count
- Less potential for contamination of item being handled
- Very low extractable mean less contamination from reactive ions
- Uniform thickness assures equal sensitivity in all critical areas
- In accordance with FDA regulations

Applications

Cleanrooms, pharmaceutical industry, electronics assembly

Art. nr.	Description	Size
115LNR/S	Long, white, rolled powder free	S
125LNR/M	Long, white, rolled powder free	M
135LNR/L	Long, white, rolled powder free	L
145LNR/XL	Long, white, rolled powder free	XL

Cleanroom gloves

Chemsoft



Features and benefits

- 100% Nitrile rubber gloves
- Rolled cuff prevents tearing when donning
- Cleanroom packaged for protection against airborne contamination. Double bagged with cleanroom compatible packaging and labeling materials
- State-of-the-art cleaning process reduces particulate contamination
- Low modulus formulation is stretchier for a more comfortable fit
- Low level of particles and extractables
- Antistatic formulation eliminates static discharge in many cases

Applications

Cleanrooms, pharmaceutical industry, paint shops

Art. nr.	Description	Thickness	Length	Sizes
CE412W	White, powder free	0.12 mm	12"/30cm	S, M, L, XL

AK



Features and benefits

- 100% natural rubber latex has excellent dexterity and elasticity
- Powder-free manufacturing process reduces particulate and extractable contamination
- Diamond embossed palm has excellent dry and wet grip
- Cleanroom packaged to protect gloves from airborne contamination. Double bagged with clean room compatible packaging and labeling materials
- Size embossed on gloves so there is no ink to contaminate process
- Low level of particles and extractables

Applications

Cleanrooms, pharmaceutical industry

Art. nr.	Description	Thickness	Length	Sizes
AK18150	Orange, powder free	0.50 mm	15"/38cm	7S, 8M, 9L, 10XL, 11XXL

SK



Features and benefits

- 100% powder free Nitrile formulation has superior solvent resistance reduce contamination.
- Sandpatch finish has excellent wet and dry grip
- Cleanroom packaged to protect gloves from airborne contamination. Double bagged with cleanroom compatible packaging and labeling materials
- Size embossed on gloves so there is no ink to contaminate process
- Low level of particles and extractables

Applications

Cleanroom applications requiring good abrasion resistance as well as resistance to solvents

Art. nr.	Description	Thickness	Length	Sizes
SK142W	White, powder free	0.38 mm	14"/33cm	8M, 9L, 10XL, 11XXL

Glovebox Gloves

Nitribox



Features and benefits

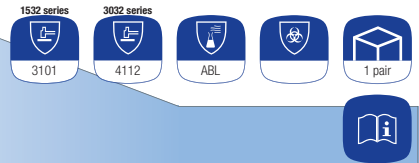
- One piece design is more convenient and safer than nitrile glove and sleeve assemblies
- Comfort: this glove is more than 30% lighter than a comparable Hypalon glove, therefore much more comfortable to work with
- Dexterity: Due to the softer material and better fit, small objects can be handled much easier
- Grip: Rough finish gives extra grip. After cleaning with Alcohol the surface is not becoming slippery, like other glove materials tend to do
- Mechanical protection: tensile strength and modulus is higher than most other materials
- Chemical resistance: Nitrile offers good protection against bases, acids, alcohols and many esters and solvents
- Antistatic properties: a surface resistivity of 10^{11} ohm/square so it is more antistatic than Neoprene and Hypalon
- In accordance with FDA regulations

Applications

Glovebox operations in pharmaceutical, biotech, semi-conductor, and manufacturing industries

Art. nr.	Cuff diameter	Length	Thickness	Size
8LA1832A	8"/203mm	81cm	0,51mm	9Q (9¾)
10LA1832A	10"/254mm	81cm	0,51mm	10H (10½)

Neoprene Glovebox



Features and benefits

- Manufactured from premium quality milled Neoprene which provides high permeation resistance to vapours & gases
- Protection against acids, alcohols, oils, solvents, esters, grease and animal fats
- Solvent based, multi-dip manufacturing process provides multiple layers of polymer (like a glove within a glove) which results in a glove of superior quality
- High tensile strength provides resistance to accidental tears
- Good elongation provides flexibility: ideal for work requiring dexterity and sensitivity
- Good abrasion resistance helps provide a long service life
- In accordance with FDA regulations
- Rolled cuff with 4.8mm thickness for easy attachment to the glove box

Applications

Glovebox operations in nuclear, defence, pharmaceutical, biotech, semi-conductor and manufacturing industries

Art. nr.	Style	Cuff diameter	Length	Thickness	Sizes
5N1532	hand specific	5"/127mm	81cm	0,38mm	9Q (9¾)
5N1532A	ambidextrous	5"/127mm	81cm	0,38mm	9Q (9¾)
6N1532	hand specific	6"/152mm	81cm	0,38mm	8H (8½) 9Q (9¾) 10H (10½)
6N1532A	ambidextrous	6"/152mm	81cm	0,38mm	9Q (9¾) 10H (10½)
7N1532	hand specific	7"/178mm	81cm	0,38mm	9Q (9¾)
7N1532A	ambidextrous	7"/178mm	81cm	0,38mm	8H (8½) 9Q (9¾) 10H (10½)
8N1532	hand specific	8"/203mm	81cm	0,38mm	8H (8½) 9Q (9¾) 10H (10½)
8N1532A	ambidextrous	8"/203mm	81cm	0,38mm	9Q (9¾) 10H (10½)
10N1532A	ambidextrous	10"/254mm	81cm	0,38mm	9Q (9¾)
5N3032	hand specific	5"/127mm	81cm	0,76mm	9Q (9¾)
5N3032A	ambidextrous	5"/127mm	81cm	0,76mm	9Q (9¾)
6N3032	hand specific	6"/152mm	81cm	0,76mm	9Q (9¾) 10H (10½)
6N3032A	ambidextrous	6"/152mm	81cm	0,76mm	9Q (9¾) 10H (10½)
7N3032	hand specific	7"/178mm	81cm	0,76mm	9Q (9¾)
7N3032A	ambidextrous	7"/178mm	81cm	0,76mm	8H (8½) 9Q (9¾)
8N3032	hand specific	8"/203mm	81cm	0,76mm	8H (8½) 9Q (9¾) 10H (10½)
8N3032A	ambidextrous	8"/203mm	81cm	0,76mm	9Q (9¾) 10H (10½)
10N3032A	ambidextrous	10"/254mm	81cm	0,76mm	9Q (9¾)

Hypalon® Glovebox gloves

Hypalon®/ Neoprene



Features and benefits

- Protection against acids, alcohols, oils, solvents, esters, grease and animal fats
- Neoprene layer provides high permeation resistance to vapours & gases as well as resistance to oils, greases, fuels and acetone
- Hypalon outer layer provides superior resistance to ozone and oxidizing chemicals such as alcohols, alkalis and acids. Also highly resistant to UV radiation in both artificial light and sunlight
- Hypalon also offers improved abrasion resistance to further extend glove service life
- White Hypalon surface will not hide contamination and is easily cleaned
- Solvent based, multi-dip manufacturing process provides multiple layers of polymer (like a glove within a glove) which results in a glove of superior quality
- High tensile strength provides resistance to accidental tears
- Good elongation provides flexibility: ideal for work requiring dexterity and sensitivity
- Rolled cuff with 4.8mm thickness for easy attachment to the glove box

Applications

Glovebox operations in nuclear, defence, pharmaceutical, biotech, semiconductor and manufacturing industries.

Art. nr.	Style	Cuff diameter	Length	Thickness	Sizes
8NY3032	Hand specific	8"/203mm	81 cm	0.76mm	8H (8½) 9Q (9¾) 10H (10½)
8NY3032A	Ambidextrous	8"/203mm	81 cm	0.76mm	9Q (9¾) 10H (10½)
7NY3032	Hand specific	7"/178mm	81 cm	0.76mm	9Q (9¾)
7NY3032A	Ambidextrous	7"/178mm	81 cm	0.76mm	8H (8½) 9Q (9¾) 10H (10½)
5NY3032	Hand specific	5"/127mm	81 cm	0.76mm	9Q (9¾)
5NY3032A	Ambidextrous	5"/127mm	81 cm	0.76mm	9Q (9¾)

Hypalon®



Features and benefits

- Hypalon provides superior resistance to ozone and oxidizing chemicals such as alcohols, alkalis and acids. Also highly resistant to UV radiation in both artificial light and sunlight
- Hypalon also offers improved abrasion resistance to further extend glove service life
- White Hypalon surface will not hide contamination and is easily cleaned
- Natural soft feel for greater worker comfort
- Solvent based, multi-dip manufacturing process provides multiple layers of polymer (like a glove within a glove) which results in a glove of superior quality
- High tensile strength provides resistance to accidental tears
- Rolled cuff with 4.8mm thickness for easy attachment to the glove box

Applications

Glovebox operations in nuclear, defence, pharmaceutical, biotech, semiconductor and manufacturing industries.

Art. nr.	Style	Cuff diameter	Length	Thickness	Sizes
5Y1532	Hand specific	5"/127mm	81 cm	0.38mm	9Q (9¾)
5Y1532A	Ambidextrous	5"/127mm	81 cm	0.38mm	9Q (9¾)
7Y1532	Hand specific	7"/178mm	81 cm	0.38mm	9Q (9¾)
7Y1532A	Ambidextrous	7"/178mm	81 cm	0.38mm	8H (8½) 9Q (9¾) 10H (10½)
8Y1532	Hand specific	8"/203mm	81 cm	0.38mm	8H (8½) 9Q (9¾) 10H (10½)
8Y1532A	Ambidextrous	8"/203mm	81 cm	0.38mm	8H (8½) 9Q (9¾) 10H (10½)
5Y3032	Hand specific	5"/127mm	81 cm	0.76mm	9Q (9¾)
7Y3032	Hand specific	7"/178mm	81 cm	0.76mm	9Q (9¾)
8Y3032	Hand specific	8"/203mm	81 cm	0.76mm	8H (8½) 9Q (9¾) 10H (10½)
8Y3032A	Ambidextrous	8"/203mm	81 cm	0.76mm	8H (8½) 9Q (9¾) 10H (10½)

Butyl glovebox gloves

Butyl



Features and benefits

- Butyl provides highest permeation resistance to vapours and gases, as well as exceptional resistance to a broad range of toxic chemicals
- Highly resistant to ketones (MEK, MIBK, acetone) and esters (tricresyl phosphate, amyl acetate, ethyl acetate)
- Butyl has a soft and flexible feel, even at low temperatures, which reduces hand fatigue and enhances worker comfort
- Solvent based, multi-dip manufacturing process provides multiple layers of polymer (like a glove within a glove)
- In accordance with FDA regulations
- Rolled cuff with 4.8mm thickness for easy attachment to the glove box

Applications

Glovebox operations in nuclear, defence, pharmaceutical, biotech, semiconductor and manufacturing industries. Particularly suited to applications involving highly toxic chemical hazards.

Art. nr.	Style	Cuff diameter	Length	Thickness	Sizes
8B1532	Hand specific	8"/203mm	81cm	0,38mm	8H (8½) 9Q (9¾) 10H (10½)
8B1532A	Ambidextrous	8"/203mm	81cm	0,38mm	9Q (9¾) 10H (10½)
7B1532	Hand specific	7"/178mm	81cm	0,38mm	9Q (9¾)
7B1532A	Ambidextrous	7"/178mm	81cm	0,38mm	8H (8½) 9Q (9¾) 10H (10½)
5B1532	Hand specific	5"/127mm	81cm	0,38mm	9Q (9¾)
5B1532A	Ambidextrous	5"/127mm	81cm	0,38mm	9Q (9¾)
8B3032	Hand specific	8"/203mm	81cm	0,76mm	8H (8½) 9Q (9¾) 10H (10½)
8B3032A	Ambidextrous	8"/203mm	81cm	0,76mm	9Q (9¾) 10H (10½)
7B3032	Hand specific	7"/178mm	81cm	0,76mm	9Q (9¾)
7B3032A	Ambidextrous	7"/178mm	81cm	0,76mm	8H (8½) 9Q (9¾)
5B3032	Hand specific	5"/127mm	81cm	0,76mm	9Q (9¾)
5B3032A	Ambidextrous	5"/127mm	81cm	0,76mm	9Q (9¾)

Lead-Loaded Glovebox Gloves

Hypalon®



Features and benefits

- 0.1 mm lead equivalency for attenuation of soft gamma radiation
- Hypalon provides superior resistance to ozone and oxidizing chemicals such as alcohols, alkalis and acids. Also highly resistant to UV radiation in both artificial light and sunlight
- Hypalon also offers improved abrasion resistance to further extend glove service life
- White Hypalon surface will not hide contamination and is easily cleaned
- Solvent based, multi-dip manufacturing process provides multiple layers of polymer (like a glove within a glove) which results in a glove of superior quality
- Different coloured lead loaded (orange) and Hypalon layers provide a visual indication of glove damage or excessive wear
- High tensile strength provides resistance to accidental tears
- Rolled cuff with 4.8mm thickness for easy attachment to the glove box

Applications

Glovebox operations in nuclear and defence industries

Art. nr.	Style	Cuff diameter	Length	Thickness	Sizes
8YLY3032	Hand specific	8"/203mm	81cm	0.76mm	8H (8½) 9Q (9¾) 10H (10½)
8YLY3032A	Ambidextrous	8"/203mm	81cm	0.76mm	9Q (9¾) 10H (10½)
7YLY3032	Hand specific	7"/178mm	81cm	0.76mm	9Q (9¾)
7YLY3032A	Ambidextrous	7"/178mm	81cm	0.76mm	9Q (9¾)
5YLY3032	Hand specific	5"/127mm	81cm	0.76mm	9Q (9¾)

Neoprene



Features and benefits

- 0,1 mm lead equivalency for attenuation of soft gamma radiation
- Manufactured from premium quality milled neoprene which provides high permeation resistance to vapours&gases
- Protection against acids, alcohols, oils, solvents, esters, grease and animal fats
- Different coloured neoprene and lead-loaded (orange) layers provide a visual indication of glove damage or excessive wear
- Solvent based, multi-dip manufacturing process provides multiple layers of polymer (like a glove within a glove) which results in a glove of superior quality
- High tensile strength provides resistance to accidental tears
- Good abrasion resistance helps provide a long service life
- Rolled cuff with 4.8mm thickness for easy attachment to the glove box

Applications

Glovebox operations in nuclear, defence, pharmaceutical, biotech, semiconductor and manufacturing industries

Art. nr.	Style	Cuff diameter	Length	Thickness	Sizes
8NLL3032	Hand specific	8"/203mm	81cm	0.76mm	8H (8½) 9Q (9¾) 10H (10½)
8NLL3032A	Ambidextrous	8"/203mm	81cm	0.76mm	9Q (9¾) 10H (10½)
7NLL3032	Hand specific	7"/178mm	81cm	0.76mm	9Q (9¾)
5NLL3032	Ambidextrous	5"/127mm	81cm	0.76mm	9Q (9¾)

Lead-Loaded Glovebox & Short Isolator Gloves

Hypalon® - Neoprene



Features and benefits

- 0.1 mm lead equivalency for attenuation of soft gamma radiation
- Protection against acids, alcohols, oils, solvents, esters, grease and animal fats
- Hypalon outer layer provides superior resistance to ozone and oxidizing chemicals such as alcohols, alkalis and acids. Also highly resistant to UV radiation in both artificial light and sunlight
- Hypalon also offers improved abrasion resistance to further extend glove service life
- White Hypalon surface will not hide contamination and is easily cleaned
- Different colour neoprene, lead loaded (orange) and
- Hypalon layers provide a visual indication of glove damage or excessive wear
- Solvent based, multi-dip manufacturing process provides multiple layers of polymer (like a glove within a glove) which results in a glove of superior quality
- High tensile strength provides resistance to accidental tears
- Rolled cuff with 4.8mm thickness for easy attachment to the glove box

Applications

Glovebox operations in nuclear and defence industries

Art. nr.	Style	Cuff diameter	Length	Thickness	Sizes
8NLY3032	Hand specific	8"/203mm	81cm	0.76mm	8H (8½) 9Q (9¾) 10H (10½)
8NY3032A	Ambidextrous	8"/203mm	81cm	0.76mm	9Q (9¾) 10H (10½)
7NLY3032	Hand specific	7"/178mm	81cm	0.76mm	9Q (9¾)
7NLY3032A	Ambidextrous	7"/178mm	81cm	0.76mm	9Q (9¾)
5NLY3032A	Ambidextrous	5"/127mm	81cm	0.76mm	9Q (9¾)

Short Isolator Hypalon®



Features and benefits

- Hypalon provides superior resistance to ozone and oxidizing chemicals such as alcohols, alkalis and acids
- Also highly resistant to UV radiation in both artificial light and sunlight
- Hypalon also offers improved abrasion resistance to further extend glove service life
- White Hypalon surface will not hide contamination and is easily cleaned
- Natural soft feel for greater worker comfort
- Solvent based, multi-dip manufacturing process provides multiple layers of polymer (like a glove within a glove) which results in a glove of superior quality
- For use with sleeves
- High tensile strength provides resistance to accidental tears
- Rolled cuff with 4.8mm thickness for easy attachment to the glove box

Applications

Glovebox operations in nuclear, defence, pharmaceutical, biotech, semiconductor and manufacturing industries.

Art. nr.	Style	Cuff diameter	Length	Thickness	Sizes
Y103	Hand specific	96.6 - 106.6mm	14"/35cm	0.33mm	7, 8, 9, 10
Y103A	Ambidextrous	96.6 - 106.6mm	14"/35cm	0.33mm	7, 8, 9, 10
Y154A	Ambidextrous	96.6 - 106.6mm	14"/35cm	0.38mm	7, 8, 9, 10
Y254A	Ambidextrous	96.6 - 106.6mm	14"/35cm	0.63mm	7, 8, 9, 10

Short Isolator Gloves & Sleeves

Short Neoprene



Features and benefits

- Manufactured from premium quality milled Neoprene which provides high permeation resistance to vapours & gases
- Protection against acids, alcohols, oils, solvents, esters, grease and animal fats
- Solvent based, multi-dip manufacturing process provides multiple layers of polymer (like a glove within a glove) which results in a glove of superior quality
- High tensile strength provides resistance to accidental tears
- Good elongation provides flexibility: ideal for work requiring dexterity and sensitivity
- Good abrasion resistance helps provide a long service life
- For use with sleeves
- In accordance with FDA regulations
- Rolled cuff with 4.8mm thickness for easy attachment to the glove box

Applications

Glovebox operations in nuclear, defence, pharmaceutical, biotech, semiconductor and manufacturing industries

Art. nr.	Style	Cuff diameter	Length	Thickness	Sizes
N103A	Ambidextrous	96.6 - 106.6mm	14"/35cm	0,33mm	7, 8, 9, 10
N204A	Ambidextrous	96.6 - 106.6mm	14"/35cm	0,50mm	7, 8, 9, 10

Sleeves



Features and benefits

- Hypalon provides superior resistance to ozone and oxidizing chemicals such as alcohols, alkalis and acids
- Also highly resistant to UV radiation in both artificial light and sunlight
- Hypalon also offers improved abrasion resistance to further extend glove service life
- White Hypalon surface will not hide contamination and is easily cleaned
- Natural soft feel for greater worker comfort
- Solvent based, multi-dip manufacturing process provides multiple layers of polymer (like a glove within a glove) which results in a glove of superior quality
- For use with short drybox gloves
- High tensile strength provides resistance to accidental tears
- Rolled cuff with 4.8mm thickness for easy attachment to the glove box

Applications

Glovebox operations in nuclear, defence, pharmaceutical, biotech, semiconductor and manufacturing industries

Art. nr.	Cuff diameter	Length	Thickness
YSL2027	10"/254mm	28"/69cm	0,51mm

Glovebox Guidelines

Sizes and availability

North /US sizes	8 ½	9 ¾	10 ½
Glove circumference at hand in millimeter	222	250	267
Hand circumference according CE	203	229	254
Corresponding CE size	8	9	10
Styles available	6" LH & RH	5" LH & RH	8" LH & RH
	7" AMBI	5" AMBI	8" AMBI
	8" LH & RH	6" LH & RH	
LH+ RH = anatomical		6" (5,5) AMBI (SHORT)	
Ambi = ambidextrous		6" (5,5) AMBI (LONG)	
		7" LH & RH	
		7" AMBI	
		8" LH & RH	
		8" AMBI	
		10' AMBI	

Port sizes/cuff diameter

Sizes
5, 6, 7, 8, 10 inch

Hand sizes

Code	Description
8H	8 ½
9Q	9 ¾
10H	10 ½
A	Ambidextrous

Available materials

Code	Material
B	Butyl
N	Neoprene
Y	Hypalon
NY	Hypalon/Neoprene
F	Viton
L	Lead loaded

Conversion table

Length	1 inch	25.4 mm	
Thickness	1 mil	0.025 mm	
Cuff diameter	port 5	127 mm	+/- 6.35 mm
	port 6	152 mm	+/- 6.35 mm
	port 6 (5.5)	140 mm	+/- 6.35 mm
	port 7	178 mm	+/- 6.35 mm
	port 8	203 mm	+/- 6.35 mm
	port 10	254 mm	+/- 6.35 mm

Available thicknesses

Mil	mm
5 mil	0.38 mm
20 mil	0,50 mm
25 mil	0.63 mm
30 mil	0,76 mm
35 mil	0.89 mm

Explanation of article codes

e.g. 8Y1532A/9Q:

Code	Description
8	Port size
Y	Material like Hypalon
15	Thickness, 15 mil = 0,38 mm
32	Length, 32 inch = 81 cm
A	Ambidextrous
9Q	Hand size = 9 ¾

Production to order

Glovebox gloves are no stock items. All orders will be planned and produced according to the manufacturing schedules and capacities. After receipt of an order, we will inform you about the real delivery time that the factory is giving us.

Chemical resistance guidelines

This Chemical Resistance Guide incorporates three types of information:

Degradation (D)

is a deleterious change in one or more of the glove's physical properties. The most obvious forms of degradation are the loss of the glove's strength and excessive swelling. Several published degradation lists (primarily "The General Chemical Resistance of Various Elastomers" by the Los Angeles Rubber Group, Inc.) were used to determine degradation.

Breakthrough time (BT)

is defined as the elapsed time between initial contact of the liquid chemical with the outside surface of the glove and the time at which the permeation rate reaches 0.1 mg/m² /sec. WHEN BREAKTHROUGH OCCURS, THE GLOVE IS NO LONGER PROVIDING ADEQUATE PROTECTION.

Permeation rate (PR)

measured in milligrams per square metre per second (mg/m²/sec) is the measured steady state flow of the permeating chemical through the glove elastomer. Glove thickness plays an important role in resistance to permeation.

The glove styles tested for permeation were the SSG, F101, B174, LA102G and PNLB1815. The permeation data in this guide are based on permeation tests performed in accordance with ASTM Standard F 739 under laboratory conditions by North Safety Products or independent AIHA accredited laboratories. Neither North Safety Products nor the independent laboratory assumes any responsibility for the suitability of an end user's selection of gloves based on this guide.

General Recommendation

The Guide also provides a colour-coded general recommendation on which gloves should be evaluated and tested first, based on data from multiple sources. (See general recommendation colour key).

For information about chemicals not listed please contact our customer service.

The finest chemical handling gloves deserve to be used with the finest respiratory products. Please consult the current North Safety Products Respiratory Protection Catalogue for proper respiratory selection.

Warning

Protective gloves and other protective apparel selection must be based on the user's assessment of the workplace hazards. Glove and Apparel materials do not provide unlimited protection against all chemicals. It is the users responsibility to determine before use that the Glove and Apparel will resist permeation and degradation by the chemicals (including chemical mixtures) in the environment of intended use. **Failure by the user to select the correct protective gloves can result in injury, sickness or death**

To obtain maximum life, protective gloves and other protective apparel should have chemicals removed from the surface by washing or other appropriate methods after each use. Protective apparel should be stored away from the contaminating atmosphere.

Punctured, torn or otherwise ruptured apparel must be removed from service; unservicable apparel may be disposed of only in accordance with applicable waste disposal regulations.

Key to Degradation and Permeation Ratings

E - Excellent

Exposure has little or no effect. The glove retains its properties after extended exposure

G - Good

Exposure has minor effect with long term exposure. Short term exposure has little or no effect

F - Fair

Exposure causes moderate degradation of the glove. Glove is still useful after short term exposure but caution should be exercised with extended exposure

P - Poor

Short term exposure will result in moderate degradation to complete destruction

N/D

Permeation was not detected during the test

I/D

Insufficient data to make a recommendation

Physical Performance Chart

Physical Characteristics	Silver Shield®	Viton	Butyl	Nitrile	Natural Rubber
Abrasion Resistance	F	G	G	E	E
Cut Resistance	P	G	G	E	E
Puncture (Snag) Resistance	P	G	G	E	E
Flexibility	E	G	G	E	E
Heat Resistance	F	G	G	G	G
Ozone Resistance	E	E	E	G	P
Tensile Strength	E	G	G	E	E
Low Gas Permeability	E	E	E	F	P




Note: Products in these categories vary in capabilities. Laboratory tests are necessary for specific recommendations. Viton is a Registered Trademark of DuPont Company.

Chemical resistance guide

Chemical name	CAS Nr.	Silver Shield			Viton			Butyl			Nitrile			Natural Rubber		
		D	BT	PR	D	BT	PR	D	BT	PR	D	BT	PR	D	BT	PR
Acetaldehyde	75-07-0	E	>8 hrs	N/D	P	0 min	281.9	E	>8 hrs	0.066	P	0 min	161	I/D	I/D	I/D
Acetic Acid (100%) (Glacial)	64-19-7	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	F	38 min	1.9	F	1.3 hrs	0.39
Acetic Aldehyde	75-07-0	E	>8 hrs	N/D	P	0 min	281.9	E	>8 hrs	0.066	P	0 min	161	I/D	I/D	I/D
Acetic Ester	141-78-6	E	>8 hrs	N/D	I/D	I/D	I/D	E	7.6 hrs	3.4	P	8 min	145	I/D	I/D	I/D
Acetone	67-64-1	E	>8 hrs	N/D	P	2 min	383	E	>8 hrs	N/D	P	3 min	291	P	8 min	93.2
Acrylic Acid	79-10-7	E	>8 hrs	N/D	G	5.9 hrs	0.23	E	>8 hrs	N/D	F	I/D	I/D	G	54 min	1.6
Acrylonitrile	107-13-1	E	>8 hrs	N/D	F	14 min	28	E	>8 hrs	N/D	P	6 min	29.8	P	16 min	0.11
Ammonia (99%)	7664-41-7	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D	I/D	I/D	I/D	I/D	I/D	I/D
Ammonium Hydroxide (29%)	1336-21-6	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	F	2.2 hrs	0.05	G	60 min	28.7
Aniline	62-53-3	E	>8 hrs	N/D	P	6 min	18.7	E	>8 hrs	N/D	F	1.1 hrs	45	I/D	I/D	I/D
Aniline Oil	62-53-3	E	>8 hrs	N/D	P	6 min	18.7	E	>8 hrs	N/D	F	1.1 hrs	45	I/D	I/D	I/D
Benzaldehyde	100-52-7	I/D	I/D	I/D	E	>8 hrs	4	E	>8 hrs	N/D	P	I/D	I/D	I/D	I/D	I/D
Benzene	71-43-2	E	>8 hrs	N/D	E	5.9 hrs	0.012	P	31 min	32.3	P	<6 min	>29	I/D	I/D	I/D
Bromoacetonitrile	590-17-0	I/D	I/D	I/D	E	>8 hrs	N/D	E	>8 hrs	N/D	I/D	I/D	I/D	I/D	I/D	I/D
Bromobenzene	108-86-1	E	I/D	I/D	E	>8 hrs	N/D	P	32 min	39.8	P	13 min	9.1	I/D	I/D	I/D
1,3-Butadiene	106-99-0	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D	I/D	I/D	I/D	I/D	I/D	I/D
Butyl Acetate	123-86-4	E	>8 hrs	N/D	P	I/D	I/D	G	1.8 hrs	7.61	P	29 min	54.4	F	18 min	47
Butyraldehyde	123-72-8	I/D	I/D	I/D	P	54 min	9	E	>8 hrs	N/D	P	I/D	I/D	I/D	I/D	I/D
Carbon Bisulfide	75-15-0	E	>8 hrs	N/D	E	>8 hrs	N/D	P	3 min	98.4	P	9 min	51	I/D	I/D	I/D
Carbon Disulfide	75-15-0	E	>8 hrs	N/D	E	>8 hrs	N/D	P	3 min	98.4	P	9 min	51	I/D	I/D	I/D
Carbon Tetrachloride	56-23-5	E	>8 hrs	N/D	E	>13 hrs	N/D	P	I/D	I/D	G	3.4 hrs	5	I/D	I/D	I/D
Caustic Soda (50%)	1310-73-2	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D
Chlorine	7782-50-5	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D	I/D	I/D	I/D	I/D	I/D	I/D
2-Chloroethanol	107-07-3	I/D	I/D	I/D	E	>8 hrs	N/D	E	>8 hrs	N/D	I/D	I/D	I/D	I/D	I/D	I/D
Chloroform	67-66-3	E	>8 hrs	N/D	E	9.5 hrs	0.46	P	I/D	I/D	P	4 min	352	I/D	I/D	I/D
3-Chloroprene	107-05-1	E	>4 hrs	N/D	F	31 min	16	P	50 min	281/D	I/D	I/D	I/D	I/D	I/D	I/D
Curing Agent Z	N/A	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D	I/D	I/D	I/D	I/D	I/D	I/D
Cyclohexane	110-82-7	E	>4hrs	N/D	E	>7 hrs	N/D	P	50 min	103.8	G	I/D	I/D	I/D	I/D	I/D
Cyclohexanol	108-93-0	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>11 hrs	N/D	E	>16 hrs	N/D	I/D	I/D	I/D
Cyclohexanone	108-94-1	E	>8 hrs	N/D	P	29 min	86.3	E	>16 hrs	N/D	P	I/D	I/D	F	15 min	46.9
Di(2-ethylhexyl)phthalate	117-81-7	I/D	I/D	I/D	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D	I/D	I/D	I/D
Dibutylphthalate	84-74-2	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>16 hrs	N/D	E	>16 hrs	N/D	I/D	I/D	I/D
1,2-Dichloroethane	107-06-2	E	>8 hrs	N/D	E	>8 hrs	N/D	P	2.9 hrs	53	P	8 min	82.7	I/D	I/D	I/D
Dichloromethane	75-09-2	E	>8 hrs	N/D	F	1 hr	7.32	I/D	I/D	I/D	P	4 min	766	I/D	I/D	I/D
Diethyl Ether	60-29-7	E	>8 hrs	N/D	P	12 min	21.5	P	8 min	92.2	P	14 min	21.8	I/D	I/D	I/D
Diethyl Oxide	60-29-7	E	>8 hrs	N/D	P	12 min	21.5	P	8 min	92.2	P	14 min	21.8	I/D	I/D	I/D
Diethylamine	109-89-7	E	>8 hrs	N/D	P	35 min	852	P	47 min	46	F	I/D	I/D	I/D	I/D	I/D
Diethylaminoethanol	100-37-8	I/D	I/D	I/D	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D	I/D	I/D	I/D
1,4-Diethylene Dioxide	123-91-1	I/D	I/D	I/D	P	23 min	26.8	E	>20 hrs	N/D	P	28 min	77.1	I/D	I/D	I/D
Diethylene Ether	123-91-1	I/D	I/D	I/D	P	23 min	26.8	E	>20 hrs	N/D	P	28 min	77.1	I/D	I/D	I/D
Diethylene Oxide	123-91-1	I/D	I/D	I/D	P	23 min	26.8	E	>20 hrs	N/D	P	28 min	77.1	I/D	I/D	I/D
Diethylenetriamine	111-40-0	I/D	I/D	I/D	E	>8 hrs	N/D	E	>8 hrs	N/D	P	I/D	I/D	I/D	I/D	I/D
Diisobutyl Ketone (80%)	108-83-8	E	>8 hrs	N/D	F	1.1 hrs	90.6	G	3.3 hrs	41.2	F	2.9 hrs	49	I/D	I/D	I/D
Dimethyl Acetamide	127-19-5	F	1.5 hrs	0.728	P	25 min	3	E	>8 hrs	N/D	I/D	I/D	I/D	I/D	I/D	I/D
Dimethyl Formamide	68-12-2	E	>8 hrs	N/D	P	8 min	6.5	E	>8 hrs	N/D	F	9 min	15	I/D	I/D	I/D
Dimethyl Mercury	593-74-8	E	>4 hrs	<0.017	P	<15 min	3.1	P	<15 min	46.7	I/D	I/D	I/D	I/D	I/D	I/D
Dimethyl Sulfoxide	67-68-5	G	I/D	I/D	F	1.5 hrs	5	E	>8 hrs	N/D	F	40 min	5.2	I/D	I/D	I/D

D = Degradation
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E = Excellent
G = Good
F = Fair
P = Poor
N/D = None Detected
I/D = Insufficient Data




 **Good for total immersion**
 **Good for accidental splash protection and intermittent contact**
 **Only use with extreme caution. Glove will fail with only short exposure**

Chemical resistance guide

Chemical name	CAS Nr.	Silver Shield			Viton			Butyl			Nitrile			Natural Rubber		
		D	BT	PR	D	BT	PR	D	BT	PR	D	BT	PR	D	BT	PR
Dimethylketone	67-64-1	E	>8 hrs	N/D	P	2 min	383	E	>8 hrs	N/D	P	3 min	291	P	10 min	12.2
Diocetyl Phthalate	117-81-7	I/D	I/D	I/D	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D	I/D	I/D	I/D
1,4-Dioxane	123-91-1	I/D	I/D	I/D	P	23 min	26.8	E	>20 hrs	N/D	P	28 min	77.1	I/D	I/D	I/D
Dioxyethylene Ether	123-91-1	I/D	I/D	I/D	P	23 min	26.8	E	>20 hrs	N/D	P	28 min	77.1	I/D	I/D	I/D
Divinyl Benzene	1321-74-0	E	>8 hrs	N/D	E	>17 hrs	N/D	F	2.2 hrs	238	P	I/D	I/D	I/D	I/D	I/D
Epichlorohydrin	106-89-8	I/D	I/D	I/D	P	2 hrs	4	E	>8 hrs	N/D	P	I/D	I/D	I/D	I/D	I/D
1,2-Epoxypropane	75-56-9	I/D	I/D	I/D	P	1 min	1790	F	2.2 hrs	7	P	<6 min	>3.9	I/D	I/D	I/D
Ethanal	75-7-0	E	>8 hrs	N/D	P	0 min	281.9	E	>8 hrs	0.066	P	0 min	161	I/D	I/D	I/D
Ethanol	64-17-5	E	>8 hrs	N/D	I/D	I/D	I/D	E	>8 hrs	N/D	I/D	I/D	I/D	I/D	I/D	I/D
Ether	60-29-7	E	>8 hrs	N/D	P	12 min	21.5	P	8 min	92.2	P	14 min	21.8	I/D	I/D	I/D
Ethyl Acetate	141-78-6	E	>8 hrs	N/D	P	I/D	I/D	G	7.6 hrs	3.4	P	8 min	145	I/D	I/D	I/D
Ethyl Alcohol	64-17-5	E	>8 hrs	N/D	I/D	I/D	I/D	E	>8 hrs	N/D	I/D	I/D	I/D	G	31 min	2.4
Ethyl Aldehyde	75-07-0	E	>8 hrs	N/D	P	0 min	281.9	E	>8 hrs	0.066	P	0 min	161	I/D	I/D	I/D
Ethyl Ether	60-29-7	E	>8 hrs	N/D	P	12 min	21.5	P	8 min	92.2	P	14 min	21.8	I/D	I/D	I/D
Ethylamine (70% in water)	75-04-7	F	51 min	0.65	P	I/D	I/D	E	>12 hrs	N/D	F	1.1 hrs	30.1	I/D	I/D	I/D
Ethylene Dichloride	107-06-2	E	>8 hrs	N/D	E	>8 hrs	N/D	F	2.9 hrs	53	P	8 min	82.7	I/D	I/D	I/D
Ethylene Glycol	107-21-1	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	E	>8hrs	N/D
Ethylene Oxide	75-21-8	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D	I/D	I/D	I/D	I/D	I/D	I/D
Formaldehyde (37% in water)	50-00-0	E	>8 hrs	N/D	E	>16 hrs	N/D	E	>16 hrs	N/D	E	>21 hrs	N/D	I/D	I/D	I/D
Furfural	98-01-1	E	>8 hrs	N/D	F	3.5 hrs	14.8	E	>16 hrs	N/D	P	24 min	265	I/D	I/D	I/D
Glutaraldehyde (25%)	111-30-8	I/D	I/D	I/D	E	>8 hrs	N/D	E	>8 hrs	N/D	P	I/D	I/D	E	>6 hrs	N/D
Heptane	142-82-5	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D
Hexahydrobenzene	110-82-7	E	>4hrs	N/D	E	>7 hrs	N/D	F	50 min	103.8	F	I/D	I/D	I/D	I/D	I/D
Hexahydrophenol	108-93-0	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>11 hrs	N/D	E	>16 hrs	N/D	I/D	I/D	I/D
Hexamethylene	110-82-7	E	>4hrs	N/D	E	>7 hrs	N/D	F	50 min	103.8	F	I/D	I/D	I/D	I/D	I/D
Hexanaphthene	110-82-7	E	>4hrs	N/D	E	>7 hrs	N/D	F	50 min	103.8	F	I/D	I/D	I/D	I/D	I/D
Hexane	110-54-3	E	>8 hrs	N/D	E	>8 hrs	N/D	P	I/D	I/D	E	I/D	I/D	I/D	I/D	I/D
Hydrochloric Acid (37%)	7647-01-0	E	>8 hrs	N/D	E	I/D	I/D	E	I/D	I/D	E	>6 hrs	N/D	E	>6 hrs	N/D
Hydrofluoric Acid (48%)	7664-39-3	E	>8 hrs	0.013	G	I/D	I/D	F	I/D	I/D	G	1 hr	0.49	E	7 hrs	0.18
Hydrogen Chloride (gas)	7647-01-0	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D	I/D	I/D	I/D	I/D	I/D	I/D
Iodomethane	74-88-4	P	4 min	0.026	E	6.3 hrs	0.7	F	55 min	82	I/D	I/D	I/D	I/D	I/D	I/D
Isobutyl Alcohol	78-83-1	E	I/D	I/D	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D	I/D	I/D	I/D
Isopropyl Alcohol	67-63-0	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	E	>6 hrs	N/D	G	1.7 hrs	0.42
Ketohexamethylene	108-94-1	E	>8 hrs	N/D	P	29 min	86.3	E	>16 hrs	N/D	P	I/D	I/D	F	2.1 hrs	0.07
Methacrylic Acid	79-41-4	I/D	I/D	I/D	E	>8 hrs	N/D	E	>8 hrs	N/D	F	1.7 hrs	23	I/D	I/D	I/D
Methacrylonitrile	126-98-7	E	I/D	I/D	F	4 min	462	E	>8 hrs	N/D	P	7 min	560	I/D	I/D	I/D
Methanol	67-56-1	E	6 hrs	0.02	F	3 hrs	1	E	>8 hrs	N/D	F	32 min	11.8	F	19 min	1.97
Methenyl Trichloride	67-66-3	E	>8 hrs	N/D	E	9.5 hrs	0.46	I/D	I/D	I/D	P	4 min	352	I/D	I/D	I/D
Methyl Alcohol	67-56-1	E	6 hrs	0.02	F	3 hrs	1	E	>8 hrs	N/D	F	32 min	11.8	F	19 min	1.97
1-Methyl-4-tert-butylbenzene	98-51-1	E	>8 hrs	N/D	E	>8 hrs	N/D	F	1.78 hrs	8	P	I/D	I/D	I/D	I/D	I/D
Methyl Cellosolve	109-86-4	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	F	55 min	13.2	F	45 min	0.56
Methyl Chloride	74-87-3	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D	I/D	I/D	I/D	I/D	I/D	I/D
Methyl Chloroform	71-55-6	E	>8 hrs	N/D	E	>15 hrs	N/D	P	I/D	I/D	P	37 min	76.4	I/D	I/D	I/D
Methyl Iodide	74-88-4	P	4 min	0.026	E	6.3 hrs	0.7	F	55 min	82	I/D	I/D	I/D	I/D	I/D	I/D
Methylamine (40% in water)	74-89-5	F	46 min	1.28	E	>16 hrs	N/D	E	>15 hrs	N/D	E	>8 hrs	N/D	I/D	I/D	I/D
Methylbenzene	108-88-3	E	>8 hrs	N/D	E	>16 hrs	N/D	P	6 min	511	P	11 min	68.1	P	3 min	82.2
Methylene Chloride	75-09-2	E	>8 hrs	N/D	F	1 hr	7.32	P	I/D	I/D	P	4 min	766	I/D	I/D	I/D

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		D	BT	PR	D	BT	PR	D	BT	PR	D	BT	PR	D	BT	PR
4,4-Methylene Dianiline	101-77-9	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D	F	I/D	I/D	I/D	I/D	I/D
Monoethanolamine	141-43-5	I/D	I/D	I/D	E	>8 hrs	N/D	E	>8 hrs	N/D	I/D	I/D	I/D	I/D	I/D	I/D
Morpholine	110-91-8	E	>8 hrs	N/D	G	1.9 hrs	97	E	>16 hrs	N/D	P	48 min	206	I/D	I/D	I/D
Naphtha	8052-41-3	E	>8 hrs	N/D	I/D	I/D	I/D	I/D	I/D	I/D	E	>6 hrs	N/D	I/D	I/D	I/D
n-Hexane	110-54-3	E	>8 hrs	N/D	E	>8 hrs	N/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D
Nitrobenzene	98-95-3	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D	F	29 min	1.7	P	7 min	8.4
Nitromethane	75-52-5	I/D	I/D	I/D	I/D	I/D	I/D	E	>8 hrs	N/D	I/D	I/D	I/D	P	7 min	2.83
1-Nitropropane	108-03-2	E	>8 hrs	N/D	P	17 min	26.1	E	>8 hrs	N/D	P	12 min	29.5	I/D	I/D	I/D
n-Methyl-2-Pyrrolidone	872-50-4	I/D	I/D	I/D	I/D	I/D	I/D	E	8 hrs	N/D	F	1.45 hrs	0.388	F	1.26 hrs	3.14
n-Propyl Acetate	109-60-4	E	>8 hrs	N/D	I/D	I/D	I/D	F	2.7 hrs	2.86	P	17 min	72.5	I/D	I/D	I/D
Oxalic Acid	144-62-7	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D	G	I/D	I/D	I/D	I/D	I/D
p-Dioxane	123-91-1	I/D	I/D	I/D	P	23 min	26.8	E	>20 hrs	N/D	P	28 min	77.1	I/D	I/D	I/D
Perchloric Acid (70%)	7601-90-3	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	E	>8 hrs	N/D	I/D	I/D	I/D
Perchloroethylene	127-18-4	E	>8 hrs	N/D	E	>17 hrs	N/D	P	I/D	I/D	F	1.3 hrs	5.5	I/D	I/D	I/D
Perchloromethane	56-23-5	E	>8 hrs	N/D	E	>13 hrs	N/D	I/D	I/D	I/D	F	3.4 hrs	5	I/D	I/D	I/D
Phenol (85% in water)	108-95-2	E	>8 hrs	N/D	E	>15 hrs	N/D	E	>20 hrs	N/D	I/P	39 min	>1500	F	2.2 hrs	4.64
Phenylamine	62-53-3	E	>8 hrs	N/D	P	6 min	18.7	E	>8 hrs	N/D	F	1.1 hrs	45	I/D	I/D	I/D
Phosphoric Acid (85%)	7664-38-2	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	E	>8 hrs	N/D	E	>8 hrs	N/D
Pimelic Ketone	108-94-1	E	>8 hrs	N/D	P	29 min	86.3	E	>16 hrs	N/D	I/D	I/D	I/D	F	2.1 hrs	0.07
2-Propanone	67-64-1	E	>8 hrs	N/D	P	2 min	383	E	>8 hrs	N/D	P	3 min	291	P	10 min	12.2
Propyl Acetate	109-60-4	E	>8 hrs	N/D	P	I/D	I/D	G	2.7 hrs	2.86	P	17 min	72.5	I/D	I/D	I/D
Propyl Alcohol	71-23-8	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	I/D	E	4.4 hrs	1.1	I/D	I/D	I/D
Propylene Oxide	75-56-9	I/D	I/D	I/D	P	1 min	1790	F	2.2 hrs	7	P	<6 min	>3.9	I/D	I/D	I/D
p-tert-Butyltoluene	98-51-1	E	>8 hrs	N/D	E	>8 hrs	N/D	F	1.78 hrs	8	P	I/D	I/D	I/D	I/D	I/D
Pyridine	110-86-1	I/D	I/D	I/D	P	38 min	74	E	>8 hrs	N/D	P	I/D	I/D	I/D	I/D	I/D
Sodium Hydroxide 50%	1310-73-2	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D
Stoddard Solvent	8052-41-3	E	>8 hrs	N/D	I/D	I/D	I/D	I/D	I/D	I/D	E	>6 hrs	N/D	I/D	I/D	I/D
Styrene	100-42-5	E	>6 hrs	N/D	E	>6 hrs	N/D	F	35 Mins	0.19	P	11 min	>3.35	I/D	I/D	I/D
Sulfuric Acid (50%)	7664-93-9	E	>6 hrs	N/D	E	I/D	I/D	E	I/D	I/D	G	>6 hrs	N/D	G	>6 hrs	N/D
Sulfuric Acid (93%)	7664-93-9	E	>8 hrs	N/D	E	>8 hrs	N/D	E	>8 hrs	N/D	F	1.9 hrs	11.4	G	5.1 hrs	N/D
Tetrachloroethylene	127-18-4	E	>8 hrs	N/D	E	>17 hrs	N/D	P	I/D	I/D	F	1.3 hrs	5.5	I/D	I/D	I/D
Tetrachloromethane	56-23-5	E	>8 hrs	N/D	E	>13 hrs	N/D	I/D	I/D	I/D	F	3.4 hrs	5	I/D	I/D	I/D
Tetrahydrofuran	109-99-9	E	>8 hrs	N/D	P	0 min	327	F	27 min	112	P	0 min	167	P	5 min	360
Thioglycolic Acid	68-11-1	I/D	I/D	I/D	E	>8 hrs	N/D	E	>8 hrs	N/D	I/D	I/D	I/D	I/D	I/D	I/D
Toluene	108-88-3	E	>8 hrs	N/D	E	>16 hrs	N/D	P	6 min	511	P	11 min	68.1	P	3 min	82.2
Toluene Diisocyanate	584-84-9	E	>8 hrs	N/D	I/D	I/D	I/D	E	I/D	I/D	G	I/D	I/D	I/D	I/D	I/D
1,1,1-Trichloroethane	71-55-6	E	>8 hrs	N/D	E	>15 hrs	N/D	P	I/D	I/D	F	37 min	76.4	I/D	I/D	I/D
Trichloroethylene	79-01-6	E	>8 hrs	N/D	E	7.4 hrs	0.24	P	14 min	550	P	4 min	283	P	<5 min	894
Trichloromethane	67-66-3	E	>8 hrs	N/D	E	9.5 hrs	0.46	I/D	I/D	I/D	P	4 min	352	I/D	I/D	I/D
Triethanolamine	102-71-6	I/D	I/D	I/D	I/D	I/D	I/D	E	>8 hrs	N/D	I/D	I/D	I/D	E	>8 hrs	N/D
Triethylamine	121-44-8	I/D	I/D	I/D	E	>8 hrs	N/D	P	I/D	I/D	E	>8 hrs	N/D	I/D	I/D	I/D
Vinegar Naphtha	141-78-6	E	>8 hrs	N/D	P	I/D	I/D	E	7.6 hrs	3.4	P	8 min	145	I/D	I/D	I/D
Vinylstyrene	1321-74-0	E	>8 hrs	N/D	E	>17 hrs	N/D	F	2.2 hrs	238	P	I/D	I/D	I/D	I/D	I/D
Xylene	1330-20-7	E	>8 hrs	N/D	E	>8 hrs	N/D	P	I/D	I/D	P	21 min	18.5	I/D	I/D	I/D

D = Degradation
BT = Breakthrough Time
PR = Permeation Rate

E = Excellent
G = Good
F = Fair
P = Poor
N/D = None Detected
I/D = Insufficient Data

 Good for total immersion
 Good for accidental splash protection and intermittent contact
 Only use with extreme caution. Glove will fail with only short exposure

Alphabetical

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Icons used

General



Material



Weight



Customizable



3A coating



4A coating



4A+ coating

Eye protection



Lollypop packaging



RX Insert



Replaceable lens



Pantoscopic angling

Hearing protection



SNR Value

Respiratory protection



Adjustable fit



Dust filter



Gas filter

Hand protection



EN 388



EN374.2003



EN374.2003



EN374.2003



EN407



EN511



EN421



EN421



Coating



Packaging



EN420 - Consult the instructions for use

Fall protection



Servicable



Positioning



Ladder climbing



Rescue



Descent



Fall arrest



Confined spaces



Construction working



Extended D-ring



Work restraint



Scaffolding work