

Selection Guide for Gloves

This guide describes the most common types of protective work gloves and the types of hazards they guard against.

1. Disposable Gloves. Usually made of light-weight plastic. They can help guard against mild irritants.

2. Fabric Gloves. Made of cotton or fabric blend. They are generally used to help improve your grip when handling slippery objects. They also help insulate your hands from mild heat or cold.

3. Leather Gloves. Used to guard against injuries from sparks or scraping against rough surfaces. You should use them in combination with an insulated liner if you are working with electricity.

3. Chemical Resistance Gloves. May be made of rubber, neoprene, polyvinyl alcohol or vinyl, etc. They protect your hands from corrosives, oils, and solvents.

4. Metal Mesh Gloves. Used to protect your hands from accidental cuts and scratches. They are used most commonly by persons working with cutting tools or other sharp instruments.

5. Aluminized Gloves. Made of aluminized fabric. They are designed to insulate your hands from intense heat. These gloves are most commonly used by persons working with molten materials.

The following tables are guides to the different types of glove materials and the chemicals they will protect you against. **Note**¹: When you are selecting chemical resistance gloves, be sure to consult the manufacturer's recommendations, especially if your gloved hand will be immersed in the chemical. **Note**²: Latex gloves are known to cause allergic reactions to individuals donning the gloves. Please substitute another appropriate non-latex glove from the attached chart and replace it.

Glove Chart

Type	Advantages	Disadvantages	Use Against
Natural Rubber	Low cost, good physical properties, dexterity	Poor against oils, greases, organics. Frequently imported; may be poor quality	Bases, alcohols, dilute water solutions; fair against aldehydes, ketones
Natural rubber blends	Low cost, dexterity, better chemical resistance than natural rubber against some chemicals	Physical properties frequently inferior to natural rubber	Bases, alcohols, dilute water solutions; fair against aldehydes, ketones
Polyvinyl chloride (PVC)	Low cost, very good physical properties, medium cost, medium chemical resistance	Plasticizers can be stripped; frequently imported may be poor quality	Strong acids and bases, salts, other water solutions, alcohols
Neoprene	Medium cost, medium chemical resistance, medium physical properties		Oxidizing acids, anilines, phenol, glycol ethers
Nitrile	Low cost, excellent physical properties, dexterity	Poor against benzene, methylene chloride, trichloroethylene, many ketones	Oils, greases, aliphatic chemicals, xylene, perchloroethylene, trichloroethane; fair against toluene
Butyl	Specialty glove, polar organics	Expensive, poor against hydrocarbons, chlorinated solvents	Glycol ethers, ketones, esters
Polyvinyl alcohol (PVA)	Specialty glove, resists a very broad range of organics, good physical properties	Very expensive, water sensitive, poor against light alcohols	Aliphatics, aromatics, chlorinated solvents, ketones (except acetone), esters, ethers
Fluoroelastomer (Viton)*	Specialty glove, organic solvents	Extremely expensive, poor physical properties, poor against some ketones, esters, amines	Aromatics, chlorinated solvents, also aliphatics and alcohols
Norfoil (Silver Shield)	Excellent chemical resistance	Poor fit, easily punctures, poor grip, stiff	Use for Hazmat work

*Trademark of DuPont Dow Elastomers

Glove Type and Chemical Use

*Limited service	VG = Very Good	G = Good	F = Fair	P = Poor (not recommended)
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Chemical	Neoprene	Natural Rubber	Butyl	Nitrile
*Acetaldehyde	VG	G	VG	G
Acetic acid	VG	VG	VG	VG
*Acetone	G	VG	VG	P
Ammonium hydroxide	VG	VG	VG	VG
*Amyl acetate	F	P	F	P
Aniline	G	F	F	P
*Benzaldehyde	F	F	G	G
*Benzene	F	F	F	P
Butyl acetate	G	F	F	P
Butyl alcohol	VG	VG	VG	VG
Carbon disulfide	F	F	F	F
*Carbon tetrachloride	F	P	P	G
Castor oil	F	P	F	VG
*Chlorobenzene	F	P	F	P
*Chloroform	G	P	P	P
Chloronaphthalene	F	P	F	F
Cromic Acid (50%)	F	P	F	F
Citric acid (10%)	VG	VG	VG	VG
Cyclohexanol	G	F	G	VG
*Dibutyl phthalate	G	P	G	G
Diesel fuel	G	P	P	VG

Chemical	Neoprene	Natural Rubber	Butyl	Nitrile
Diisobutyl ketone	P	F	G	P
Dimethylfomamide	F	F	G	G
Diocetyl phthalate	G	P	F	VG
Dioxane	VG	G	G	G
Epoxy resins, dry	VG	VG	VG	VG
*Ethyl acetate	G	F	G	F
Ethyl alcohol	VG	VG	VG	VG
Ethyl ether	VG	G	VG	G
*Ethylene dichloride	F	P	F	P
Ethylene glycol	VG	VG	VG	VG
Formaldehyde	VG	VG	VG	VG
Formic acid	VG	VG	VG	VG
Freon 11	G	P	F	G
Freon 12	G	P	F	G
Freon 21	G	P	F	G
Freon 22	G	P	F	G
*Furfural	G	G	G	G
Gasoline, leaded	G	P	F	VG
Gasoline, unleaded	G	P	F	VG
Glycerine	VG	VG	VG	VG
Hexane	F	P	P	G
Hydrochloric acid	VG	G	G	G
Hydrofluoric acid (48%)	VG	G	G	G
Hydrogen peroxide (30%)	G	G	G	G
Hydroquinone	G	G	G	F

Chemical	Neoprene	Natural Rubber	Butyl	Nitrile
Isooctane	F	P	P	VG
Isopropyl alcohol	VG	VG	VG	VG
Kerosene	VG	F	F	VG
Ketones	G	VG	VG	P
Lacquer thinners	G	F	F	P
Lactic acid (85%)	VG	VG	VG	VG
Lauric acid 36 %	VG	F	VG	VG
Lineoleic acid	VG	P	F	G
Linseed oil	VG	P	F	VG
Maleic acid	VG	VG	VG	VG
Methyl alcohol	VG	VG	VG	VG
Methylamine	F	F	G	G
Methyl bromide	G	F	G	F
*Methyl chloride	P	P	P	P
*Methyl ethyl ketone	G	G	VG	P
*Methyl isobutyl ketone	F	F	VG	P
Methyl methacrylate	G	G	VG	F
Monoethanolamine	VG	G	VG	VG
Morpholine	VG	VG	VG	G
Naphthalene	G	F	F	G
Naphthalene, aliphatic	VG	F	F	VG
Naphthalene, aromatic	G	P	P	G
*Nitric acid	G	F	F	F
Nitromethane (95.5%)	F	P	F	F
Nitropropane (95.5%)	F	P	F	F
Octyl alcohol	VG	VG	VG	VG

Chemical	Neoprene	Natural Rubber	Butyl	Nitrile
Oleic acid	VG	F	G	VG
Oxalic acid	VG	VG	VG	VG
Palmitic acid	VG	VG	VG	VG
Perchloric acid (60%)	VG	F	G	G
Perchloroethylene	F	P	P	G
Petroleum distillates (naphtha)	G	P	P	VG
Phenol	VG	F	G	F
Phosphoric acid	VG	G	VG	VG
Potassium hydroxide	VG	VG	VG	VG
Propyl acetate	G	F	G	F
Propyl alcohol	VG	VG	VG	VG
Propyl alcohol (iso)	VG	VG	VG	VG
Sodium hydroxide	VG	VG	VG	VG
Styrene	P	P	P	F
Styrene (100%)	P	P	P	F
Sulfuric acid	G	G	G	G
Tannic acid (65%)	VG	VG	VG	VG
Tetrahydrofuran	P	F	F	F
*Toluene	F	P	P	F
Toluene diisocyanate	F	G	G	F
*Trichloroethylene	F	F	P	G
Triethanolamine	VG	G	G	VG
Tung oil	VG	P	F	VG
Turpentine	G	F	F	VG
*Xylene	P	P	P	F