

Resistance to Chemicals of Common Glove Materials

The following information is based on publicly available research data, and is intended only as a general guide in the selection of the right glove. Variations in material thickness, chemical concentration, duration of exposure, and glove quality influence a glove's specific protection. Before handling any hazardous materials, always consult with your INON distributor or salesperson.

The table below provides chemical compatibility information of four types of gloves and is coded as follows:

(E=Excellent, G=Good, F=Fair, P=Poor)

Chemical	Glove Material			
	Latex	Neoprene	Nitrile	Vinyl
Acetaldehyde	G	G	E	G
Acetic acid	E	E	E	E
Acetone	G	G	G	F
Ammonium hydroxide (sat.)	G	E	E	E
Aniline	F	G	E	G
Benzaldehyde	F	F	E	G
Benzene ¹	P	F	G	F
Benzyl chloride ¹	F	P	G	P
Calcium hypochlorite	P	G	G	G
Carbon disulfide	P	P	G	F
Carbon tetrachloride ¹	P	F	G	F
Chloroforma	P	F	G	P
Chromic acid	P	F	F	E
Diethyl ether	F	G	E	P
Ethyl acetate	F	G	G	F
Ethylene dichloride ¹	P	F	G	P
Ethylene glycol	G	G	E	E
Formaldehyde	G	E	E	E
Formic acid	G	E	E	E
Glycerol	G	G	E	E
Hydrochloric acid (conc.)	G	G	G	E
Hydrofluoric acid (30%)	G	G	G	E

Hydrogen peroxide	G	G	G	E
Methylamine	G	G	E	E
Methyl ethyl ketone	F	G	G	P
Methylene chloride ¹	F	F	G	F
Napthalene ¹	G	G	E	G
Nitric acid (conc.)	P	P	P	G
Perchloric acid	F	G	F	E
Potassium hydroxide (sat.)	G	G	G	E
Sodium hydroxide	G	G	G	E
Sodium hypochlorite	G	P	F	G
Sulphuric acid (conc.)	G	G	F	G
Toluene ¹	P	F	G	F
Trichloroethylene ¹	P	F	G	F
Triethanolamine	F	E	E	E

¹ Aromatic and halogenated hydrocarbons will attack all types of natural and synthetic glove materials. Should swelling of the glove occur, the user should change to fresh gloves and allow the swollen gloves to dry and return to normal. .

Note: Nitrile gloves are made from nitrile butadiene rubber, which is a copolymer of acrylonitrile and butadiene. Depending on how the glove is used, this material is reported to be more resistant to tears and punctures and petrochemicals, than latex or vinyl. Some nitrile gloves, like latex gloves, require vulcanization and may therefore contain vulcanizing chemicals known to cause Type IV (delayed) allergic reactions in some individuals. **INON® nitrile gloves do not contain any of these chemicals.**

Source: National Research Council, *Prudent Practices for Handling Hazardous Chemicals in Laboratories*, National Academy Press, Washington, D.C., 1981, pp. 159-160.