

Appendix G. Glove Compatibility Guide

Resistance to Chemicals of Common Glove Material
(E = Excellent, G = Good, F = Fair, P = Poor)

Chemical	Natural Rubber	Neoprene	Nitrile	Vinyl
Acetaldehyde	G	G	E	G
Acetic acid	E	E	E	E
Acetone	G	G	G	F
Acrylonitrile	P	G	-	F
Ammonium hydroxide (conc.)	G	E	E	E
Aniline	F	G	E	F
Benzaldehyde	F	F	E	G
Benzene	P	F	G	F
Benzyl Chloride (a)	F	P	G	P
Bromine	G	G	-	G
Butane	P	E	-	P
Butyraldehyde	P	G	-	G
Calcium hypochlorite	P	G	G	G
Carbon disulfide	P	P	G	F
Carbon tetrachloride	P	F	G	F
Chlorine	G	G	-	G
Chloroacetone	F	E	-	P
Chloroform (a)	P	F	G	P
Chromic acid	P	F	F	E
Cyclohexane	F	E	-	P
Dibenzyl ether	F	G	-	P
Dibutyl phthalate	F	G	-	P
Diethanolamine	F	E	-	E
Diethyl ether	F	G	E	P
Dimethyl Sulfoxide (b)	-	-	-	-
Ethyl acetate	F	G	G	F

Ethylene dichloride (a)	P	F	G	P
Ethylene glycol	G	G	E	E
Ethylene trichloride (a)	P	P	-	P
Fluorine	G	G	-	G
Formaldehyde	G	E	E	E

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

Chemical	Natural Rubber	Neoprene	Nitrile	Vinyl
Formic acid	G	E	E	E
Glycerol	G	G	E	E
Hexane	P	E	-	P
Hydrobromic acid (40%)	G	E	-	E
Hydrochloric acid (conc.)	G	G	G	E
Hydrofluoric acid (30%)	G	G	G	E
Hydrogen peroxide	G	G	G	E
Iodine	G	G	-	G
Methylamine	G	G	E	E
Methyl cellosolve	F	E	-	P
Methyl chloride (a)	P	E	-	P
Methylene chloride (a)	F	F	G	F
Methyl ethyl ketone	F	G	G	P
Monoethanolamine	F	E	-	E
Morpholine	F	E	-	E
Naphthalene (a)	G	G	E	G
Nitric acid (conc.)	P	P	P	G
Perchloric acid	F	G	F	E
Phenol	G	E	-	E
Phosphoric acid	G	E	-	E
Potassium hydroxide (sat.)	G	G	G	E
Propylene dichloride	P	F	-	P

Sodium hydroxide	G	G	G	E
Sodium hypochlorite	G	P	F	G
Sulfuric acid (conc.)	G	G	F	G
Toluene (a)	P	F	G	F
Trichloroethylene (a)	P	F	G	F
Tricresyl phosphate	P	F	-	F
Triethanolamine	F	E	E	E
Trinitrotoluene	P	E	-	P

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

(b) No data on the resistance to dimethyl sulfoxide of natural rubber, neoprene, nitrile rubber, or vinyl materials are available; the manufacturer of the substance recommends the use of butyl rubber gloves.

The table was taken from Prudent Practices for Handling Chemicals in Laboratories, National Research Council, National academy Press Washington, D.C., P. 159-160 (1981)

B. Physical Performance Chart

<i>Glove Material</i>	<i>Abrasion Resistance</i>	<i>Cut Resistance</i>	<i>Puncture Resistance</i>	<i>Heat Resistance</i>	<i>Flexibility</i>
<u>Dry Grip</u>					
Natural Rubber	1	3/8	E	E	F E
Neoprene	F	E	E	E	G G
Buna-N	G	E	G	F	F G
Butyl	G	G	G	P	G F
Polyvinyl Chloride	G	E	E	F	F E
Polyvinyl Alcohol	G	E	E	F	F E
Polyethylene	E	F	E	P	G G
Nitril-					

Buradiene							
Rubber	E	E	E	F	G	G	

Key: E-Excellent, G-Good, F-Fair, P-Poor, NR-Not Recommended