

**UNIVERSITY OF ROCHESTER
ENVIRONMENTAL HEALTH & SAFETY**

APPENDIX 5

GLOVE SELECTION GUIDANCE ⁽¹⁾

Resistance to Chemicals of Common Glove Material

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

Chemical	Natural Rubber	Neoprene	Nitrile	Vinyl	Chemical	Natural Rubber	Neoprene	Nitrile	Vinyl
Acetaldehyde	G	G	E	G	Formic Acid	G	E	E	E
Acetic Acid	E	E	E	E	Glycerol	G	G	E	E
Acetone	G	G	G	F	Hexamine	P	E	-	E
Acrylonitrile	P	G	-	F	Hydrobromic Acid (40%)	G	E	-	E
Ammonium Hydroxide	G	E	E	E	Hydrochloric Acid	G	G	G	E
Aniline	F	G	E	G	Hydrofluoric Acid (30%)	G	G	G	E
Benzaldehyde	F	F	E	G	Hydrogen Peroxide	G	G	G	E
Benzene	P	F	G	F	Iodine	G	G	-	G
Benzyl Chloride	F	P	G	P	Methylamine	G	G	E	E
Bromine	G	G	-	G	Methyl Cellosolve	F	E	-	P
Butane	P	E	-	P	Methyl Chloride	P	E	-	P
Calcium Hypochloride	P	G	G	G	Methyl Ethyl Ketone	F	G	G	P
Carbon Disulfide	P	P	G	F	Methylene Chloride	F	F	G	F
Carbon Tetrachloride	P	F	G	F	Monoethanolamine	F	E	-	E
Chlorine	G	G	-	G	Morpholine	F	E	-	E
Chloroacetone	F	E	-	P	Naphthalene	G	G	E	G
Chloroform	P	F	G	P	Nitric Acid (conc)	P	P	P	G
Chromic Acid	P	F	F	E	Perchloric Acid	F	G	F	E
Cyclohexane	F	E	-	P	Phenol	G	E	-	E
Dibenzylether	F	G	-	P	Phosphoric Acid	G	E	-	E
Dibutylphthalate	F	G	-	P	Potassium Hydroxide (sat)	G	G	G	E
Diethanolamine	F	E	-	E	Propylene Dichloride	P	F	-	P
Diethyl Ether	F	G	E	P	Sodium Hydroxide	G	G	G	E
Dimethyl Sulfoxide	-	-	-	-	Sodium Hypochlorite	G	P	F	G
Ethyl Acetate	F	G	G	F	Sulfuric Acid	G	G	F	G
Ethylene Dichloride	P	F	G	P	Toluene	P	F	G	F
Ethylene Glycol	G	G	E	E	Trichloroethylene	P	F	G	F
Ethylene Trichloride	P	P	-	P	Tricresyl Phosphate	P	F	-	F
Fluorine	G	G	-	G	Triethanolamine	F	E	E	E
Formaldehyde	G	E	E	E	Trinitrotoluene	P	E	-	P

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

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.

Taken from *Prudent Practices for Handling Hazardous Chemicals in laboratories, 1981.*

(1) This chart taken from *The University of Kentucky Personal Protective Equipment Program and Hazard Assessment*