

# Chemical Degradation

## Footwear Clothing

Chemical	RISK CODE	Footwear Clothing							
		Neoprene	Natural Rubber	PVC	Premier PVC	Neoprene**	PVC**	Special PVC	PolyNylon**
<b>HYDROCARBONS (OILS)</b>									
ASTM Oil #1	T	E	NR	G	E	G	F	G	G
ASTM Oil #3	NA	E	P	F	E	F	F	F	G
Castor Oil	NA	G	E	G	E	G	P	G	F
Coconut Oil	NA	E	F	F	E	E	G	G	G
Cottonseed Oil	NA	G	P	P	E	G	P	P	G
Cutting Oil - Sulfur Base	NA	G	P	P	E	G	P	G	G
Grease - Pet Base	NA	E	P	P	E	E	P	P	G
Lard	NA	G	P	P	E	G	P	F	F
Linseed Oil	NA	G	P	P	G	G	P	P	G
Mineral Oil	NA	G	P	P	E	G	F	G	G
Olive Oil	NA	G	P	P	E	G	P	P	G
Pine Oil	NA	P	P	P	G	P	P	F	G
Soybean Oil	NA	F	P	P	E	F	NR	F	F
Tallow "Beef Tallow"	NA	G	P	P	E	G	P	F	E
<b>HYDROCARBON (SOLVENTS)</b>									
Benzene*	T	P	P	P	P	P	P	P	P
Benzyl Chloride	T	P	P	P	P	P	P	P	P
Butane	NA	E	P	P	F	E	P	P	F
Carbon Tetrachloride	T	P	P	NR	NR	P	P	F	P
Chloroform	X	P	P	P	NR	P	P	P	P
Cyclohexane	V	P	P	F	G	P	P	F	F
Gasoline (Cracked)	X	F	F	F	G	F	F	F	G
Gasoline (SR)	X	G	NR	F	G	G	F	F	G
Hexane	X	E	P	P	G	E	P	P	G
Kerosene (CT) (JET)	X	P	NR	F	G	G	F	F	G
Kerosene (Pet)	X	G	NR	F	G	G	P	G	F
Methyl Cellosolve	NA	G	P	G	G	F	P	P	P
Methyl Chloride	T	NR	P	P	NR	NR	NR	NR	NR
Naphtha	X	NR	P	F	G	P	P	F	F
Nitrobenzene	T	NR	P	NR	NR	P	P	P	P
Perchloroethylene	X	P	P	P	F	P	P	P	P
Petroleum Solvent	V	F	P	NR	NR	F	P	F	F
Propane	NA	G	P	F	G	G	F	G	G
Toluene	X	P	P	P	P	P	P	P	F
Trichloroethylene	X	P	P	P	P	P	P	F	F
Trinitrotoluene	NA	F	P	G	G	F	G	F	F
Turpentine	X/S	P	P	P	G	P	F	G	F
Xylene	X	P	P	NR	NR	P	P	F	F
<b>KETONES</b>									
Acetone	V	G	F	P	NR	G	P	P	F
Chloroacetone	NA	G	G	P	P	G	P	P	P
Methyl Ethyl Ketone	V	P	F	P	P	F	P	P	F
<b>ALDEHYDES</b>									
Acetaldehyde	XI	E	NR	NR	NR	E	F	F	P
Benzaldehyde	X	P	F	P	P	P	P	P	P
Butyraldehyde	XI	P	NR	F	F	G	P	P	P
Formaldehyde - <37% *	T/S	E	E	E	E	E	G	E	P
Furfural	T	G	F	P	P	G	P	P	F
<b>ALCOHOLS</b>									
Amyl Alcohol	X	E	G	G	G	E	G	E	P
Benzyl Alcohol	XI	E	G	G	G	E	F	F	NR
Butyl Alcohol	X	E	E	G	G	E	G	G	G
Diacetone Alcohol	XI	E	P	P	P	E	F	G	F
Diethanolamine	XI	G	F	P	F	F	NR	F	NR
Ethyl Alcohol	X/S	E	E	G	E	E	G	G	F
Ethylene Glycol	XI	E	E	E	E	E	G	E	G
Glycerine	NA	E	E	E	E	E	E	E	E
Methyl Alcohol - Methanol	T	E	E	E	E	E	F	G	G
Octyl Alcohol	X	E	E	E	E	E	F	G	G
Propyl Alcohol	X	E	E	E	E	E	F	G	G
Triethanolamine	XI	G	G	G	G	G	G	G	G

### KEY TO FOOTWEAR

NEOPRENE - Molded Overshoes; Hand-made Footwear  
 NATURAL RUBBER - Molded Overshoes; Hand-made Footwear  
 PVC - Two Stage Injection Molded; Better Grade, General Purpose, Workbrutes  
 PREMIER PVC - Two Stage Injection Molded, Premier

### KEY TO CLOTHING

NEOPRENE\*\* - Premier, Magnaprene  
 POLYNYLON\*\*\* - Iron Eagle, Eagle  
 PVC\*\* - American, Scrim, DuraScrim  
 PVC Polyester, Double-Ply PVC, PVC Film  
 SPECIAL PVC - Webdri, Safetyflex, Electra, ElectraBrite

Key to Degradation Ratings: E = Excellent G = Good F = Fair P = Poor NR = Not Recommended  
 \*A known or potential carcinogen.  
 \*\*These materials are available in both heat seal construction garments as well as stitch tape seam construction.

We recommend a heat sealed garment (Iron Eagle Polyurethane, Safetyflex, Durascrim) for any application for protective clothing which will encounter a toxic or highly corrosive chemical.  
 Information in this chart is intended as a general guide only. The ultimate determination of suitability of a product for a particular application is the responsibility of the purchaser. Upon written request, a sample of the material in question will be furnished to aid the purchaser in determining its suitability.

RISK CODES RATINGS: Tx = HIGHLY TOXIC; X = HAZARDOUS TO HEALTH (LESS TOXIC); T = TOXIC; XI = IRRITANT; Cx = HIGHLY CORROSIVE; S = SENSITIZERS; C = CORROSIVE; V = POTENTIALLY HARMFUL; NA = NOT ASSIGNED

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		Neoprene	Natural Rubber	PVC	Premier PVC	Neoprene**	PVC**	Special PVC	PolyNylon**
<b>ORGANIC ACIDS</b>									
Acetic Acid - Glacial 99%	Cx	E	G	F	F	E	F	F	P
Carbolic Acid - (Phenol) 70%	T/C	P	NR	G	F	F	F	F	P
Citric Acid - <30%	NA	E	E	E	E	E	E	E	P
Formic Acid	Cx	E	E	G	G	E	G	E	P
Lactic Acid	C	E	F	E	E	E	G	E	P
Maleic Acid	XI	F	F	E	E	E	F	E	G
Oleic Acid	NA	G	P	P	G	G	P	P	E
Stearic Acid	NA	G	P	P	F	G	NR	G	G
Tannic Acid	XI	E	E	E	E	E	E	E	GE
<b>INORGANIC ACIDS</b>									
Carbonic Acid - H2O	NA	E	E	E	E	E	E	E	E
Hydrobromic Acid	T/XI	P	G	G	G	P	P	G	P
Hydrochloric Acid - 70%	XI	F	E	G	G	G	G	E	G
Hydrochloric Acid - <10%	XI	E	E	G	E	E	G	E	G
Hydrofluoric Acid - Conc. 99.99%	Tx/Cx	P	P	NR	NR	P	F	G	NR
Hydrogen Sulfide-Gas	T/XI	G	P	G	G	G	G	G	NR
Nitric Acid - Conc. 70%	XI	P	P	G	G	P	F	F	P
Nitric Acid - 10%	Cx	F	F	E	G	F	F	G	P
Perchloric Acid - Conc. 70%	Cx	G	F	F	F	F	P	G	P
Phosphoric Acid - Conc. 86%	C	E	G	G	G	G	F	G	P
Sulfuric Acid - Conc. 93%	Cx	NR	P	F	F	P	P	G	P
Sulfuric Acid - <30%	C	G	F	G	G	G	P	E	P
<b>SALTS AND ALKALIES</b>									
Ammonium Hydroxide - 30-70%	C	E	P	G	G	E	G	G	P
Ammonium Sulfate	T	E	G	E	E	E	G	E	G
Calcium Chloride - Crys. Del.	X	E	E	E	E	E	E	E	E
Calcium Hypochlorite - Crys. Sol.	T/XI	G	G	G	G	F	G	E	F
Caustic Potash-Caustic	NA	E	G	E	E	E	G	E	G
Copper Chloride	T	E	E	E	E	E	E	E	G
Copper Sulfate - Crys.	T/XI	E	G	E	E	E	F	G	E
Ferric Chloride	NA	E	E	E	E	E	E	E	E
Potassium Dichromate -H2O-Sol.	T	E	G	G	E	E	G	G	G
Sodium Hydroxide - Conc. 70%	Cx	E	E	E	G	E	G	G	G
Sodium Hypochlorite - 30%	C	G	F	E	G	G	E	E	G
Tin Chloride	T	G	E	G	G	G	F	G	P
<b>ORGANIC ESTERS</b>									
Amyl Acetate	V	P	F	F	F	P	F	F	P
Butyl Acetate	V	P	P	P	P	P	P	P	P
Dibutyl Phthalate	XI	F	NR	P	P	F	P	P	F
Ethyl Acetate	V	NR	NR	P	P	G	P	P	F
Ethyl Formate	NA	G	P	F	F	G	F	G	NR
Methyl Acetate	V	G	NR	P	P	G	P	P	F
Propyl Acetate	V	P	P	P	P	P	P	P	P
Tricresol Phosphate	T	F	F	F	F	F	F	F	F
<b>MISCELLANEOUS</b>									
Acrylonitrile*	T	P	P	NR	NR	F	P	P	P
Aniline	T	G	NR	F	F	G	F	F	NR
Battery Acid	C	G	G	G	G	E	G	E	P
Blood	NA	G	F	F	F	G	F	F	F
Butter	NA	E	P	P	G	G	P	P	G
Buttermilk	NA	G	P	F	E	G	G	E	F
Carbon Disulfide	T	P	P	P	P	P	P	P	P
Chlorox (Sodium Hypochlorite 5-6%)	XI	E	G	E	E	E	E	E	E
Dibenzyl Ether	XI	G	P	P	P	G	P	P	G
Ethyl Ether	X	F	P	P	F	G	P	P	G
Fish Oil	NA	G	P	P	G	G	P	F	G
Hydrogen Peroxide - 90%	Tx/XI	P	P	F	F	P	G	E	NR
Milk	NA	E	F	F	E	E	F	G	G
Monoethanolamine	XI	NR	F	G	G	F	F	G	G
Morpholine	C/X	NR	P	F	F	P	F	F	P
Paint Remover - Acet-Alcoh-MC	XI	F	P	P	P	F	P	P	P
Soaps	NA	G	G	E	E	G	G	E	F

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