



# **CHEMICAL RESISTANCE GUIDE**

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Acetaldehyde (Ethanal) CH <sub>3</sub> CHO	X	X	X	A	B	X	A	B	A	B	A	A	C	A	A <sup>150°</sup>
Acetamide (Acetic Acid Amide) CH <sub>3</sub> CONH <sub>2</sub>	X	B	B	A		B	A	A	A	X	X	A	A		A <sup>140°</sup>
Acetate Solvents CH <sub>3</sub> COOR		X	X			X	A	B	A		A		X	A	A
Acetic Acid — 20%	B	B	C	A	A	C	A	B		A	A	C	B	A	B
Acetic Acid — 30%	X	B	C	A	A	X	A	B	X	A	A	C	B	B	B
Acetic Acid — 50% CH <sub>3</sub> COOH	C	C	C	A		C	A	B	X	A	A	C	B	B	B
Acetic Acid — Glacial CH <sub>3</sub> COOH	X	X	C	B	A	X	A	B	B	X	A	A	C	B	A <sup>120°</sup>
Acetic Anhydride (Acetic Oxide) (CH <sub>3</sub> CO) <sub>2</sub> O	X	B	C	B	C	X	A	A	B	90%B <sup>212°</sup>	A	A	X	X	B <sup>70°</sup>
Acetone (Dimethylketone) CH <sub>3</sub> COCH <sub>3</sub>	X	X	X	A	C	X	A	B	B	A	A	A	X	B <sup>120°</sup>	X
Acetone Cyanohydrin (CH <sub>3</sub> ) <sub>2</sub> C(OH)CN	X	B	X	X		X	A	A	B	B	B				
Acetonitrile (Methyl Cyanide) CH <sub>3</sub> CN		A	C	A		X	A	A	A	A	A	B <sup>100°</sup>		A	A
Acetophenone (Phenyl Methyl Ketone) C <sub>6</sub> H <sub>5</sub> COCH <sub>3</sub>	X	X	X	A		X	A	B	B	A	A	B	A <sup>70°</sup>		A
Acetyl Acetone (2,4-Pentanedione) CH <sub>3</sub> COCH <sub>2</sub> COCH <sub>3</sub>	B	X	X	A		X	A	B	X	B	B				
Acetyl Chloride CH <sub>3</sub> COCl		X	X	C	X	B	A	B	X	A	B	A	X		A
Acetylene (Ethyne) HC <sup>°</sup> CH		C	A	A	A	A	A	C	A	A	A	A	X	A	A
Acetyl Salicylic Acid (Aspirin) (CH <sub>3</sub> OCO) • C <sub>6</sub> H <sub>4</sub> COOH		X		B			A	A	X	B	B				
Acetylene Tetrabromide (Tetra Bromoethane) (CHBr <sub>2</sub> ) <sub>2</sub>		X	X			A	A	X	X	A					
Acrolein (Acrylaldehyde) H <sub>2</sub> C = CHCHO			B			A	A	A	B	B	B				
Acrylonitrile (Vinyl Cyanide) CH <sub>2</sub> =CHCN		X	X	X		X	A	B	A	A	A	A	B		A
Adipic Acid (1,4-Butanedicarboxylic Acid)		X	B			A	A	B	B	B	B	A	A		A
Allyl Alcohol (2-Propen-1-ol) CH <sub>2</sub> CHCH <sub>2</sub> OH		A	A	A		B	A	B	A	A	A				A
Alcohols R-OH					B							A	A	A	A
Amyl (1-Pentanol) C <sub>4</sub> H <sub>9</sub> CH <sub>2</sub> OH		B	B			B	A	A	B		A	A	B	A	A
Benzyl (Phenylcarbinol) C <sub>6</sub> H <sub>5</sub> CH <sub>2</sub> OH		B	X			A	A	A	B		A	A	A		A
Butyl (Butanol) C <sub>3</sub> H <sub>7</sub> CH <sub>2</sub> OH		A	A			A	A	A	B		A	A	B	A	A

RATING KEY: (A) Excellent (B) Good (C) Fair to Poor (X) Not Recommended □ No Data Available.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Diacetone (Tyranton) (CH <sub>3</sub> ) <sub>2</sub> C(OH) CH <sub>2</sub> COCH <sub>3</sub>	C	X	X	B		X	A	C	A	A	A	A	X	A	A
Ethyl (Ethanol) CH <sub>3</sub> CH <sub>2</sub> OH	X	A	A		X	B	A	B	B	B	A	A	A <sup>100°</sup>		A
Hexyl (1-Hexanol) C <sub>6</sub> H <sub>11</sub> CH <sub>2</sub> OH		B	A			A	A	B	A		A	A	A <sup>70°</sup>		A
Isobutyl (2-Methyl-1-Propanol) C <sub>3</sub> H <sub>7</sub> CH <sub>2</sub> OH	X	A	C			A	A	A	B		A	A			A
Isopropyl (2-Propanol) H <sub>3</sub> CCH(OH)CH <sub>3</sub>		B	C			A	A	B	B	C	A	A	A		A <sup>150°</sup>
Methyl (Methanol) CH <sub>3</sub> OH		A	A	X		X	A	A	B	A	A	A	A <sup>120°</sup>		A
Octyl (Caprylic Alcohol) C <sub>7</sub> H <sub>15</sub> • CH <sub>2</sub> OH		B	B			A	A	B	A		A	A			
Propyl (Propanol) C <sub>2</sub> H <sub>5</sub> CH <sub>2</sub> OH		A	A			A	A	A	A		A	A	A		A <sup>120°</sup>
Allyl Bromide (3-Bromopropene) H <sub>2</sub> C=CHCH <sub>2</sub> Br		X	X	X		B	A		X	A					
Allyl Chloride (3-Chloropropene) CH <sub>2</sub> =CHCH <sub>2</sub> Cl		X	X	X		B	A		X	C	B		A <sup>70°</sup>		A
Alkazene® (Chlorethyl or Polyisopropyl benzenes)		X	X			A	A	X							
Almond Oil (Artificial)	X	X	X	B		X	A								
Alum (Aluminum Potassium Sulfate Dodecahydrate) KAl(SO <sub>4</sub> ) <sub>2</sub> • 12H <sub>2</sub> O		A	A	A		X	A	A				B	B	A	A
Aluminum Acetate (Burow's Solution)		C	C	A		X	A	A		B	C	A	A	A <sup>100°</sup>	
Aluminum Bromide AlBr <sub>3</sub>		A	A				A								A
Aluminum Chloride AlCl <sub>3</sub>	B	A	A	A	B	A	A	20%A	X	C	B	25%A	A	B	A
Aluminum Fluoride AlF <sub>3</sub>		A	A	B		A	A	A	50%A	C	C	20%A	A	X	A
Aluminum Hydroxide (Alumina Trihydrate) Al(OH) <sub>3</sub>		A	B	A		C	A	A	10%B	30%B	B	10%B	A		A
Aluminum Nitrate Al(NO <sub>3</sub> ) <sub>3</sub> • 9H <sub>2</sub> O		A	A	A		A	A	A	X		0%A	0%B	A		A
Aluminum Phosphate AlPO <sub>4</sub>		A	A	A		A	A	A							
Aluminum Potassium Sulfate (Potash Alum) KAl(SO <sub>4</sub> ) <sub>2</sub>		A	A	A		A	A	A	10%A	X	A	B	A	A	A
Aluminum Sodium Sulfate (Soda Alum) NaAl(SO <sub>4</sub> ) <sub>2</sub>	A	A	A	A		A	A								

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	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Aluminum Sulfate (Cake Alum) $Al_2(SO_4)_3$	A	A	A	A	B	A	A	A	30%B	X	50%A <sup>167°</sup>	90%A <sup>212°</sup>	A	B	A
Amines R-NH <sub>2</sub>		B	X		A <sup>70°</sup>	X		A	A		A		B	C	
Ammonia Anhydrous, Liquid NH <sub>3</sub>	X	B	B	A	X	X	A	A	A	A	A	A	A	X	A
Ammonia Gas — Cold		A	A			A	A	A							
Ammonia Gas — Hot		B	C			X	A	A							
Ammonia Liquors		A				X	A	A	A	A	A				
Ammonium Nitrate NH <sub>4</sub> NO <sub>3</sub>		B	A	A	B	A	A	A	B	B	A	A	A	B	A
Ammonium Cupric Sulfate (NH <sub>4</sub> ) <sub>2</sub> Cu(SO <sub>4</sub> ) <sub>2</sub>			A			A	A								
Ammonium Acetate CH <sub>3</sub> CO <sub>2</sub> NH <sub>4</sub>		A				A	A	A	50%B	50%A					
Ammonium Bicarbonate NH <sub>4</sub> HCO <sub>3</sub>		A	A	A		A	A	B	B	90%B					
Ammonium Bifluoride — 10% NH <sub>4</sub> HF <sub>2</sub>		X	B				A	A	C	X	B	B	A		A
Ammonium Carbonate (NH <sub>4</sub> ) <sub>2</sub> CO <sub>3</sub>		B	X	A		A	A	A	B	B	70%B <sup>212°</sup>	70%B <sup>212°</sup>	A		A
Ammonium Casenite		A						A			A				
Ammonium Chloride (Sal Ammoniac) NH <sub>4</sub> Cl	A	A	A	A	A	A	A	A	X	X	B	A	A	X	A
Ammonium Dichromate (NH <sub>4</sub> ) <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>		A	A	A			A	A	A	30%A					
Ammonium Fluoride NH <sub>4</sub> F		B	B			20%A	A		10%B	20%B	B	40%A	B		A
Ammonium Hydroxide (Aqua Ammonia) NH <sub>4</sub> OH	A	B	B	A		B	A	A	30%A	30%B	50%A	80%A	A	B	A
Ammonium Metaphosphate		A	A	A		A	A		90%B	B	B	A	A		A
Ammonium Nitrite NH <sub>4</sub> NO <sub>2</sub>		A	A				A	A					70%A		A
Ammonium Oxalate (NH <sub>4</sub> OOC) <sub>2</sub>		A	A					A			A	A			
Ammonium Persulfate (NH <sub>4</sub> ) <sub>2</sub> S <sub>2</sub> O <sub>8</sub>	X	A	C	B		A	A	A	C	X	A		A		A
Ammonium Phosphate, Monobasic (NH <sub>4</sub> )H <sub>2</sub> PO <sub>4</sub>		A	A	A	B	A	A	A	X	X	B	5%A	A		A
Ammonium Phosphate, Di-Basic (NH <sub>4</sub> ) <sub>2</sub> HPO <sub>4</sub>		A	A			A	A	A	B		A	A	A	B	A
Ammonium Phosphate, Tri-Basic (NH <sub>4</sub> ) <sub>3</sub> PO <sub>4</sub> •3H <sub>2</sub> O		A	A			A	A	A	X		B	B	A		A
Ammonium Sulfate (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>	A	A	A	A	C	A	A	A	X	B	80%A <sup>212°</sup>	40%B	A	B	A
Ammonium Sulfide (NH <sub>4</sub> ) <sub>2</sub> S		A	A			A	A		B		B	10%A			

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	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Ammonium Sulfite (NH <sub>4</sub> ) <sub>2</sub> SO <sub>3</sub> •H <sub>2</sub> O			A			A	A		C	X	B	A <sup>212°</sup>	A	X	
Ammonium Thiocyanate NH <sub>4</sub> SCN		A	A	A		A	A		C	C	50%A	50%A			
Ammonium Thiosulfate (NH <sub>4</sub> ) <sub>2</sub> S <sub>2</sub> O <sub>3</sub>		A	A	A		A	A	A	40%A	X	10%A				
Amyl Acetate (Banana Oil) CH <sub>3</sub> CO <sub>2</sub> C <sub>5</sub> H <sub>11</sub>	X	X	X	A	C	X	A	B	A	B	A	B	X	X	A <sup>120°</sup>
Amyl Alcohol (Pentyl Alcohol) CH <sub>3</sub> (CH <sub>2</sub> ) <sub>4</sub> OH	X	A	B	A	A	A	A	B	A	A	A	B	A		A
n-Amyl Amine (1-Aminopentane) CH <sub>3</sub> (CH <sub>2</sub> ) <sub>4</sub> NH <sub>2</sub>		X	C	X		X	A								
Amyl Borate C <sub>5</sub> H <sub>11</sub> BO <sub>3</sub>		B	A			A	A	B							
Amyl Chloride (Chloropentane) CH <sub>3</sub> (CH <sub>2</sub> ) <sub>4</sub> Cl		X	X	X		A	A	C	X	A	A	B	X	A	A
Amyl Chloronaphthalene		X	B			A	A	C							
Amyl Naphthalene C <sub>15</sub> H <sub>18</sub>		X	X	X		A	A	C							
Amyl Phenol C <sub>6</sub> H <sub>4</sub> (OH)C <sub>5</sub> H <sub>11</sub>			X			A	A		A	A	A	A			
Aniline (Aniline Oil) (Amino Benzene) C <sub>6</sub> H <sub>5</sub> NH <sub>2</sub>	X	X	X	C	X	B	A	B	B	A	A	B	A	A	A
Aniline Dyes	X	C	C	C		B	A	B	B	C	B				
Aniline Hydrochloride C <sub>6</sub> H <sub>5</sub> NH <sub>2</sub> •HCl		X	C			B	A	A	X	X	X		X		A
Animal Fats & Oils	A	C	A	B	B	A	A	C	A	X	A	A			A
Animal Gelatin	A	A	A	A		A	A				A				
Anisole (Methylphenyl Ether) C <sub>6</sub> H <sub>5</sub> OCH <sub>3</sub>		X				X	A		B	B	B	B			
Ansul Ether		X	C			X	A	X							
Anthraquinone C <sub>14</sub> H <sub>8</sub> O <sub>2</sub>							A		B	B	B	A			
Anti-Freeze (Alcohol Base)	X	A	A	A		A	A		A	A	A	A			
Anti-Freeze (Glycol Base) (Prestone® Etc.)	B	B	A	A		A	A	A	A	A	A	A			
Antimony Pentachloride SbCl <sub>5</sub>			X				A		A	A	A	A			
Antimony Trichloride SbCl <sub>3</sub>			B	A		A	A		B	A	A	B	A		A
Aqua Regia (Nitric & Hydrochloric Acid)	X	X	X	X		B	A	X	X	X	X	C	C	X	A
Aroclor® PCB mixtures		X	C	X		A	A		A	B	A	90%A	X		
Aromatic Hydrocarbons C <sub>6</sub> H <sub>5</sub> R		X	X		C	A	A	C	A	A	A				
Aromatic Solvents (Benzene Etc.)	X	X	C	X		B	A		A	B	A	B			

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	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Arsenic Acid AsH <sub>3</sub> O <sub>4</sub>	X	A	B	A		A	A	A	A	X	B	B	A		A
Arsenic Trichloride (Arsenic Butter) AsCl <sub>3</sub>		A	C	X		X	A	B	B	B	X	B			
Ascorbic Acid C <sub>6</sub> H <sub>8</sub> O <sub>6</sub>						A	A		A	X	A				
Askarel® (Pyranol®) PCB mixtures	X	X	B	X		C	A	X			A				
Asphalt Hydrocarbons	B	C	B	X	B	A	A	B	A	B	A		A	B	A
Asphalt Topping Hydrocarbons		A	C		B	C	A			A	A				
ASTM — Ref Motor Fuel A (Aliphatic) Hydrocarbons	A	B	A	X	A	A	A		A	A	A	A			
ASTM — Ref Motor Fuel B (30% Aromatic) Hydrocarbons	B	X	A	X	A	A	A		A	A	A	A			
ASTM — Ref Motor Fuel C (50% Aromatic) Hydrocarbons	X	X	B	X	C	A	A		A	A	A	A			
ASTM — Ref #1 Oil (High Aniline) Hydrocarbons	A	B	A	X	A	A	A	A	A	A	A	A			
ASTM — Ref #2 Oil (Medium Aniline) Hydrocarbons	B	B	A	X	A	A	A	A	A	A	A	A			
ASTM — Ref #3 Oil (Low Aniline) Hydrocarbons	B	C	A	X	A	A	A	B	A	A	A	A			
ASTM — Ref #4 Oil (High Aniline) Hydrocarbons	X	X	B	X		A	A		A	A	A	A			
Aviation Gasoline Hydrocarbons		C	A	X		A	A		A	A	A	A			
Barbeque Sauce Water, oils, spices		A	A				A			X	A				
Barium Carbonate BaCO <sub>3</sub>		A	A	A		A	A	A	X	B	B	B	A		A
Barium Chloride Dihydrate BaCl <sub>2</sub> • 2H <sub>2</sub> O	A	A	A	A		A	A		50%B	B	B <sup>212°</sup>	B		A	A
Barium Cyanide Ba(CN) <sub>2</sub>		A	C		X	A		A			A		X		
Barium Hydroxide (Barium Hydrate) Ba(OH) <sub>2</sub>	A	A	A	A	B	A	A	A	X	B	50%A <sup>122°</sup>	B	A		A
Barium Nitrate Ba(NO <sub>3</sub> ) <sub>2</sub>		A	A						B	A	A	A	A	B	A
Barium Sulfate (Blanc Fixe) BaSO <sub>4</sub>	A	A	A	A	X	A	A	A	B	B	B		A	B	A
Barium Sulfide BaS	A	A	A	A		A	A	A	X		B	A	A		A
Beef Extract		A	A							X	A				
Beer Water, carbonate	X	A	C	A	B	A	A	A	A	X	A	A	A <sup>75°</sup>	A	A <sup>175°</sup>
Beet Sugar Liquors (Sucrose)	X	A	A	A		A	A	A	A	B	A		A	B	A

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Benzaldehyde C <sub>6</sub> H <sub>5</sub> CHO	X	X	X	B	B	X	A	B	A	A	A	A	X		A
Benzene (Benzol) C <sub>6</sub> H <sub>6</sub>	X	X	X	X	C <sup>70°</sup>	B	A	C	B	B	A <sup>167°</sup>	B	X	A	B
Benzene Sulfonic Acid C <sub>6</sub> H <sub>5</sub> SO <sub>3</sub> H		A	C	C		A	A		C	A	A	90%A	X		B <sup>100°</sup>
Benzoic Acid (Benzene Carboxylic Acid) C <sub>6</sub> H <sub>5</sub> COOH		B	X	B		A	A		B	X	B	70%A	X	B	A
Benzoyl Chloride C <sub>6</sub> H <sub>5</sub> COCl	X	X	X	X		B	A		X	A	B	B			A
Benzyl Acetate CH <sub>3</sub> CO <sub>2</sub> •H <sub>2</sub> C <sub>6</sub> H <sub>5</sub>			X			X	A		A	A	A	B			
Benzyl Alcohol C <sub>6</sub> H <sub>5</sub> CH <sub>2</sub> OH		C	X	C		A	A		A	A	A	B	A		A
Benzyl Benzoate C <sub>6</sub> H <sub>5</sub> CO <sub>2</sub> CH <sub>2</sub> C <sub>6</sub> H <sub>5</sub>		X	X	B		A	A	C	A	B	B	B			
Benzyl Chloride (Chlorotoluene) C <sub>6</sub> H <sub>5</sub> CH <sub>2</sub> Cl	X	X	X	X		A	A	C	X	A	B	A	X	A	A
Benzyl Dichloride (Benzal Chloride) C <sub>6</sub> H <sub>5</sub> CHCl <sub>2</sub>			X				A		X	B	A	B			
Biphenyl (Diphenyl) C <sub>6</sub> H <sub>5</sub> C <sub>6</sub> H <sub>5</sub>		X	X	X		A	A		A	A					
Bismuth Subcarbonate (Bismuth Carbonate) (BiO) <sub>2</sub> CO <sub>3</sub>		A	A	A		A	A				10%B				
Black Sulfate Liquor	X	A	B	A	B	A	A		C	B	A	B			
Blast Furnace Gas CO, H <sub>2</sub> , CH <sub>4</sub> , CO <sub>2</sub> , N <sub>2</sub>		A	C		B	A	A	A							
Bleach Solutions Water, chlorine, oxygen		X	X	A	C	B	A	B	X		B	A <sup>125°</sup>	X		
Borax (Sodium Borate) B <sub>4</sub> Na <sub>2</sub> O <sub>7</sub>	A	A	B	A	A	A	A	A	B	B	A	A	A	B	A
Bordeaux Mixture Copper sulfate salts		A	A	A	B	B	A	A			A	A			
Boric Acid (Boracic Acid) H <sub>3</sub> BO <sub>3</sub>	A	A	A	A	A	A	A	A	A	X	30%A	80%A <sup>167°</sup>	A	C	A
Brake Fluid (Non-Petroleum Base) Silicones or glycols		A	X	A			A	A	A	A	A	A	X		
Brewery Slop		A	A			A	A	A		A	A				
Brine (Sodium Chloride) Salt water	A	B	A	A	B	A	A			X	A	A	A		A
Bromine — Anhydrous Br <sub>2</sub>	X	X	X	C	X	A	A	C	B	C	X	A	X		A <sup>150°</sup>
Bromine Trifluoride BrF <sub>3</sub>	X	X	X	X		X	A	C	A		B		X		
Bromine Water		B	X	X		B	A	B	X	X	X	A	X		A

Rating specific to % of concentration. Temperature shown is °F. Where not shown, temperature is 70°F (21°C) Ambient.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Bromobenzene C <sub>6</sub> H <sub>5</sub> Br	X	X	X	X		B	A	X	X	B	A	B	X		
Bromochloromethane BrCH <sub>2</sub> Cl		X	X	B		C	A		X	B	B	B			
Bromotoluene C <sub>6</sub> H <sub>4</sub> BrCH <sub>3</sub>			X			B	A		X	A	A	A			
Bronzing Liquid	X	X	X	B		X	A	A			A	A			
Bunker Oil (Fuel) #5, #6 & C Hydrocarbons	C	B	A	X		A	A	B	A	A	A	A			
Butadiene C <sub>4</sub> H <sub>6</sub>	X	C	X	C		C	A	C	A	A	A		X		A
Butane (LPG) (Butyl Hydride) C <sub>4</sub> H <sub>10</sub>	B	B	A	X	A	A	A	C	A	A	A	A	X	B	A
Butter Fats	A	C	A	A	B	A	A	B	A	X	A				
Buttermilk Fats, water		A	A			A		A	A		A		A		A
Butyl Acetate CH <sub>3</sub> CO <sub>2</sub> (CH <sub>2</sub> ) <sub>3</sub> CH <sub>3</sub>	C	X	X	B	C	X	A	B	A	A	A	A	X	B	A <sup>100°</sup>
n-Butyl Acetate CH <sub>3</sub> CO <sub>2</sub> (CH <sub>2</sub> ) <sub>3</sub> CH <sub>3</sub>		X	X	X		X	A	A	A	A	A	A			
Butyl Acetyl Ricinoleate C <sub>24</sub> H <sub>44</sub> O <sub>5</sub>		X	C	C		B	A	B				A			
Butyl Acrylate CH <sub>2</sub> CHCO <sub>2</sub> C <sub>4</sub> H <sub>9</sub>		X	X	X		X	A	C							C
Butyl Alcohol (Butanol) CH <sub>3</sub> (CH <sub>2</sub> ) <sub>3</sub> OH	X	A	A	B	B	A	A	A	A	B	A	A	A		A
Butyl Amine (Aminobutane) CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> CH <sub>2</sub> NH <sub>2</sub>	X	X	B	X		X	A	A	A	A	A		X	C	B <sup>70°</sup>
Butyl Benzoate C <sub>6</sub> H <sub>5</sub> COO • (CH <sub>2</sub> ) <sub>3</sub> CH <sub>3</sub>		X		B		A	A	C	B	B	B	B			
Butyl Bromide CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> CH <sub>2</sub> Br			X			B	A								A
Butyl Butyrate CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> • CH <sub>2</sub> CO <sub>2</sub> C <sub>4</sub> H <sub>9</sub>			X			X	A		A	A	A	A			
Butyl Carbitol® CH <sub>3</sub> (CH <sub>2</sub> ) <sub>3</sub> OCH <sub>2</sub> CH <sub>2</sub> OCH <sub>2</sub> CH <sub>2</sub> OH		B	A	A		A	A	B							
Butyl Cellosolve® HOCH <sub>2</sub> CH <sub>2</sub> OC <sub>4</sub> H <sub>9</sub>		C	B			C	A	A							B
Butyl Chloride (Chlorobutane) CH <sub>3</sub> (CH <sub>2</sub> ) <sub>3</sub> Cl			X			A	A		X	B	B	B	X		A
Butyl Ether (Dibutyl Ether) (CH <sub>3</sub> (CH <sub>2</sub> ) <sub>3</sub> ) <sub>2</sub> O		B	A			C	A		A	B	A	A	X		A <sup>100°</sup>
Butyl Oleate C <sub>22</sub> H <sub>42</sub> O <sub>2</sub>		X		C		A	A	C							
Butyl Stearate CH <sub>3</sub> (CH <sub>2</sub> ) <sub>16</sub> CO <sub>2</sub> (CH <sub>2</sub> ) <sub>3</sub> CH <sub>3</sub>		X	A	C		B	A	C	B	B	B	B			A
Butylene (Butene) C <sub>4</sub> H <sub>8</sub>	X	X	B	X		B	A	X	A		A		X		A

RATING KEY: (A) Excellent (B) Good (C) Fair to Poor (X) Not Recommended  No Data Available.



CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Butyraldehyde CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> CHO	C	X	X	C		X	A	C	A	A	A	A			
Butyric Acid CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> CO <sub>2</sub> H		X	C	C	B	C	A	A	A	X	B	A	A	X	A
Butyronitrile CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> CN		X	X	A			A								
Calcium Acetate Hydrate Ca(CH <sub>3</sub> COO) <sub>2</sub> • H <sub>2</sub> O		C	B	A		X	A		C	C	B	B			
Calcium Bisulfite Ca(HSO <sub>3</sub> ) <sub>2</sub>	A	A	A	X	X	A	A		X	X	90%A	A		A	X
Calcium Carbonate (Chalk) CaCO <sub>3</sub>		A	A	A		A	A	A	C	B	B	B	A	A	A
Calcium Chlorate Ca(ClO <sub>3</sub> ) <sub>2</sub>		A	A	A		A	A		30%B	B	0%B	70%B	A		A
Calcium Chloride (Brine) CaCl <sub>2</sub> • 6H <sub>2</sub> O	A	A	A	A	A	A	A	A	A	A	A	A	A	X	A
Calcium Hydrosulfide (Calcium Sulfhydrate) Ca(HS) <sub>2</sub> • 6H <sub>2</sub> O			A			A	A								
Calcium Hydroxide (Slaked Lime) Ca(OH) <sub>2</sub>	A	A	A	A	B	A	A	A	X	B	50%B	50%A	A	X	A
Calcium Hypochlorite 20% (Calcium Oxichloride) Ca(ClO) <sub>2</sub>	X	X	C	B	5%A	B	A	A	X	X	B	B <sup>125°</sup>	A	A	A
Calcium Nitrate Ca(NO <sub>3</sub> ) <sub>2</sub>	A	A	A	A		A	A	A	40%B <sup>212°</sup>	30%B <sup>212°</sup>	50%B <sup>212°</sup>	10%B	A	X	A
Calcium Oxide (Unslaked Lime) • CaO		A	A	A	B		A		A	A	A	A			
Calcium Silicate Ca <sub>2</sub> SiO <sub>4</sub>			A			A	A		A	B	A	A			
Calcium Sulfate (Gypsum) CaSO <sub>4</sub>	B	A	A	A		A	A		A	C	10%B	10%A	A	A	X
Calcium Sulfide CaS	A	B	A	A		A	A	A	20%A	B	B	A	A <sup>120°</sup>		A
Calcium Sulfite CaSO <sub>3</sub> • 2H <sub>2</sub> O			A			A	A		10%B	B	10%A				
Calgon® (NaPO <sub>3</sub> ) <sub>6</sub>		A	A			A		A		X	A		A		
Cane Juice, Sucrose, water		A	A					A	B	A	A		X		
Cane Sugar Liquors Sucrose, water	X	A	A	A	B	A	A	A	A	A	A		A		A
Capryl Alcohol (Octanol) CH <sub>3</sub> (CH <sub>2</sub> ) <sub>6</sub> CH <sub>2</sub> OH	X	B	A	C		B	A		A	A	A	A			
Caprylic Acid (Octanoic Acid) CH <sub>3</sub> (CH <sub>2</sub> ) <sub>6</sub> COOH			C				A		A		A	A			A
Carbamate H <sub>2</sub> NCO <sub>2</sub> R	X	C	C	C		A	A	A							
Carbitol® CH <sub>3</sub> CH <sub>2</sub> OCH <sub>2</sub> CH <sub>2</sub> OCH <sub>2</sub> CH <sub>2</sub> OH	X	C	B	C		C	A	B	A	A	A	A			

Rating specific to % of concentration. Temperature shown is °F. Where not shown, temperature is 70°F (21°C) Ambient.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Carbolic Acid (see Phenol) C <sub>6</sub> H <sub>5</sub> OH	X	C	X	C		A	A	A	B	A	B	A	C	X	A <sup>150°</sup>
Carbon Dioxide (Carbonic Acid Gas) CO <sub>2</sub>	A	A	A	B	A	A	A	A	A	A	A	A	A	A	A
Carbon Disulfide (Carbon Bisulfide) CS <sub>2</sub>	C	X	X	X	C	A	A	X	A	B	90%A		X	B	A
Carbon Monoxide CO	A	A	C	C	A	C	A	A	A	A	A	A	A	B	A
Carbon Tetrachloride (Tetrachloromethane) CCl <sub>4</sub>	X	X	C	X	X	A	A	X	X	C	B	A	X	B	A
Carbonated Beverages CO <sub>2</sub> /H <sub>2</sub> O	A	A	A				A	A	C		A	A	A		A
Carbonic Acid (liquid) H <sub>2</sub> CO <sub>3</sub>		A	B		C	A	A	A	A	X	B	A	A	A	A
Casein a phosphoprotein		A	A	A		A	A		B		B	B			
Castor Oil a mixture of fatty acids	A	A	A	B	B	A	A	B	A	B	A	A			
Catsup (Ketchup)		C	A			A	A	A	B	X	A	A	A		
Cellosolve® (Glycol Ethers) HOCH <sub>2</sub> CH <sub>2</sub> OR		C	C	C	X	B	A	C	A		A	A	A <sup>100°</sup>	A	A
Cellulose Acetate C <sub>8</sub> H <sub>12</sub> O <sub>5</sub>		B	B			C	A		B	B	A	A			
Cellulube® Hydraulic Fluids (Phosphate Esters)		X	X	A	C	B	A	X	A	A	A	A			
Chlorinated Lime—35% Bleach CA(ClO) <sub>2</sub>	X	X	C	A	6%A	A	A	X		X	A				
Chlorinated Water		C	C		X	A	A		C		B	A	B	X	A
Chlorine, Dry Cl <sub>2</sub>		C	C		X	A	A	C	X	X			X	X	A
Chlorine, Wet Cl <sub>2</sub> /H <sub>2</sub> O	X	X	C	X	X	A	A	C	B	C	A	A	X	X	A
Chlorine, Anhydrous Liquid Cl <sub>2</sub>		X	X			A	A	X	X	X	X	A	X		A
Chlorine Dioxide ClO <sub>2</sub>		X	X	C		B	A	X	B		X	B	X		A
Chlorine Trifluoride ClF <sub>3</sub>	X	X	X	X		B	A	X	A		A		X		
Chloroacetic Acid (Monochloroacetic Acid) ClCH <sub>2</sub> COOH	X	C	X	B	X	C	A		X	X	X	A	A	X	A
Chloroacetone (Monochloroacetone) ClCH <sub>2</sub> COCH <sub>3</sub>		C	X	A		C	A	C	X	B	B	B	X		
Chlorobenzene (Monochlorobenzene) C <sub>6</sub> H <sub>5</sub> Cl	X	X	X	X	X	A	A	C	X	B	B	B	X	A	A <sup>150°</sup>

RATING KEY: (A) Excellent (B) Good (C) Fair to Poor (X) Not Recommended  No Data Available.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Chlorobutadiene (Chloroprene) C <sub>4</sub> H <sub>5</sub> CL		X	X	X		A	A	C	X	B	B	B	X		
Chlorobromomethane ClCH <sub>2</sub> Br		X	X			A	A	X	X	B	B		X		
Chloroform CHCl <sub>3</sub>	X	X	X	X	X	A	A	X	X	A	A	A	X	B	A
1-Chloronaphthalene C <sub>10</sub> H <sub>7</sub> Cl		X	X	X		C	A	X	X	B	B	A	X		
Chlorosulfonic Acid HSO <sub>3</sub> CL	X	X	X	X	X	X	A	A	B	B	B	A	X	X	X
o-Chlorophenol C <sub>6</sub> H <sub>5</sub> ClO		X	X	X		B	A		B	B	B			B	A
Chlorothene® (Chlorinated Solvents) CH <sub>2</sub> ClCH <sub>2</sub> Cl		X	X			C	A	A	X	X	A	A			
Chlorotrifluoroethylene C <sub>2</sub> H <sub>2</sub> ClF <sub>3</sub>			X				A		B	B	B	B			
Chlorox®		B	C			A	A	B		X	A	B	B		
Chocolate Syrup Corn syrup, water, sugar		A	A				A	A		X	A		A		
Chromic Acid — To 10% H <sub>2</sub> CrO <sub>4</sub>		X	X	A	X	A	A	X	10%B	B	X	B	X	X	A <sup>120°</sup>
Chromic Acid — 25%-50% H <sub>2</sub> CrO <sub>4</sub>	X	X	X	C	X	A	A	X	X	B	X	B	A	X	A <sup>120°</sup>
Chromic Acid — Over 50% H <sub>2</sub> CrO <sub>4</sub>	X	X	X	C	X	A	A	X	X	B	X	B	X	X	A <sup>120°</sup>
Cider (Apple Juice) Sucrose, water		A	A		B	A	A	A	B	X	A	A			
Cinnamon Oil Cinnamic acid esters		C					A	C		X	A				
Citric Acid C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> • H <sub>2</sub> O	A	A	B	A	A	A	A	A	B	X	30%A	A	B	B	A <sup>250°</sup>
Citric Oils Citric acid esters		X	C	B		A	A	C		X	A		A		
Citrus Pectin Liquor		A	A			A	A				A				
Clove Oil (Eugenol) C <sub>10</sub> H <sub>12</sub> O <sub>2</sub>		C					A	C		X	A				
Cobalt Chloride CoCl <sub>2</sub> • 6H <sub>2</sub> O	X	A	A	C		A	A	A	X				A		
Coconut Oil (Coconut Butter) Fatty acid mixture	A	B	B	A		A	A	B	B	A	A				
Cod Liver Oil (Fish Oil) Glycerides, acids, esters	A	B	B	A		A	A	C	A	X	A				
Coffee Fatty oils, acids, cellulose, water		A	A				A	A	A		A	A	A		
Coke Oven Gas H <sub>2</sub> (53%),CH <sub>4</sub> (26%) N <sub>2</sub> (11%),CO(7%)& hydrocarbons (3%)		C	C			A	A	B							A

Rating specific to % of concentration. Temperature shown is °F. Where not shown, temperature is 70°F (21°C) Ambient.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Copper Acetate Cu(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>2</sub> • CuO • 6H <sub>2</sub> O		C	B	A			A	A	X	90%A	10%B	10%B			A
Copper Chloride CuCl <sub>2</sub> • 2H <sub>2</sub> O	A	A	A	A	A	A	A	A	X	X	X	40%B	A		A
Copper Cyanide CuCN	A	A	A	A		A	A	A	X	A	10%A	A <sup>170°</sup>	A		A
Copper Fluoroborate			A	B					A	X	X	X	B		
Copper Nitrate Hexahydrate Cu(NO <sub>3</sub> ) <sub>2</sub> • 6H <sub>2</sub> O		A	A	A		A	A		X	X	A	B	A	A	A
Copper Sulfate (Blue Copperas) CuSO <sub>4</sub> • 5H <sub>2</sub> O	A	A	A	A	A	A	A	5%A	X	X	10%A	A	A	A	A
Copper Sulfide CuS			A			A	A								
Corn Oil (Maize oil) Glycerides of fatty acids	A	C	A	C	A	A	A	B	B	C	B		A		A
Cotton Seed Oil		A	C	A	A	A	A	A	B	A	C	A		A	B
Cream			C	A				A	A		X	A		A	
Creosote, Coal-Tar (Tar Oil) Hydrocarbon mixture	B	C	A	X	X	A	A	B	B	B	B	B	X	X	
Creosote, Wood-Tar Mixture of phenols		B	A	X	X	A	A				B		X	X	
Cresylic Acid (Cresol) C <sub>8</sub> H <sub>10</sub> O <sub>2</sub>	X	X	C	X		A	A	B	B	C	A	B	X	X	A <sup>150°</sup>
Crotonaldehyde CH <sub>3</sub> CHCHCHO		A	X			A	A		A	A	A	A			
Cumene (Isopropylbenzene) C <sub>6</sub> H <sub>5</sub> CH(CH <sub>3</sub> ) <sub>2</sub>		X	X	X		A	A		B	B	B	B			
Cutting Oil (Water Soluble)		X	C			A	A		A	A	A	A			
Cutting Oil (Sulfur Base)		C	A				A		A	A	A	A			
Cyclohexane C <sub>6</sub> H <sub>12</sub>	C	X	B	X	A	A	A	C	B	B	B	B	X	A	A
Cyclohexanol C <sub>6</sub> H <sub>11</sub> OH		A	B	X		A	A	B	C	B	A	A	B	A	A <sup>150°</sup>
Cyclohexanone C <sub>6</sub> H <sub>10</sub> O		X	X	C		X	A	C	B	B	B	B	X	A	A
Cyclopentane C <sub>5</sub> H <sub>10</sub>		A	B	X		A	A		B	B	B	B			
Cymene (Isopropyltoluene) C <sub>10</sub> H <sub>14</sub>		X	C	X		A	A								
Decahydronaphthalene (Decalin®) C <sub>10</sub> H <sub>18</sub>	X	X	X	X		A	A								
Decanal CH <sub>3</sub> (CH <sub>2</sub> ) <sub>8</sub> CHO			X	X		X	A								
Decane CH <sub>3</sub> (CH <sub>2</sub> ) <sub>8</sub> CH <sub>3</sub>	C	X	B	C		A	A	C					A <sup>70°</sup>		A
Decyl Alcohol (Decanol) C <sub>10</sub> H <sub>21</sub> OH		X	A			B	A								

RATING KEY: (A) Excellent (B) Good (C) Fair to Poor (X) Not Recommended □ No Data Available.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Denatured Alcohol Ethanol and denaturant	X	B	A	A		B	A	B	B	B	A	A	A		A
Detergent Solutions	X	A	A	A	B	A	A	B	B		A		A	A	
Developing Fluids & Solutions	X	A	A	C	X	A	A	A		X	A	A			
Dextrose C <sub>6</sub> H <sub>12</sub> O <sub>6</sub>	A	B	B	A	B <sup>140°</sup>	A	A		A	X	A	A	A		A
Diacetone Alcohol (Diacetone) (CH <sub>3</sub> ) <sub>2</sub> COHCH <sub>2</sub> •COCH <sub>3</sub>	C	X	X	B	C	X	A	B	A	A	A	A	X	A	C
Dibenzyl Ether (C <sub>6</sub> H <sub>5</sub> CH <sub>2</sub> ) <sub>2</sub> O	C	X	X	C		C	A	C	B	B	B	B			C
Dibenzyl Sebecate C <sub>24</sub> H <sub>30</sub> O <sub>4</sub>	X	X	X	C	A	B	A	C							
Dibutyl Amine (C <sub>4</sub> H <sub>9</sub> ) <sub>2</sub> NH		X	C	X		X	A	B		A	A	A	X		B <sup>70°</sup>
Dibutyl Phthalate (DBP) C <sub>6</sub> H <sub>4</sub> (CO <sub>2</sub> C <sub>4</sub> H <sub>9</sub> ) <sub>2</sub>	C	X	X	A	A	B	A	B	A	A	A	A	X		X
Dibutyl Sebecate (DBS) C <sub>18</sub> H <sub>34</sub> O <sub>4</sub>	X	X	X	C		C	A	B		A	A		C		
Dichloroacetic Acid Cl <sub>2</sub> CHCOOH		X	X			X	A								
o-Dichlorobenzene C <sub>6</sub> H <sub>4</sub> Cl <sub>2</sub>	X	X	X	X	X	A	A	X	X	B	B	A	B		A <sup>150°</sup>
Dichlorobutane C <sub>4</sub> H <sub>8</sub> Cl <sub>2</sub>			X			A	A		X	B	B				
Dichloroethyl Ether [ClCH <sub>2</sub> CH <sub>2</sub> ] <sub>2</sub> O			X				A		B						
Dichloro Isopropyl Ether C <sub>6</sub> H <sub>12</sub> OCl <sub>2</sub>	C	X	X	X		X	A	X					X		
Dicyclohexylamine (C <sub>6</sub> H <sub>11</sub> ) <sub>2</sub> NH		X	X	X		B	A	B							
Diesel Oil (Fuel ASTM #2) Hydrocarbons	C	C	A	X	B	A	A	C	A	A	A	A	B		A
Diester Synthetic Oils	X	X	B	X		A	A		A	A	A	A			
Diethano Amine (HOCH <sub>2</sub> CH <sub>2</sub> ) <sub>2</sub> NH	C	A	B				A			A	A	A	A		
Diethyl Amine (CH <sub>3</sub> CH <sub>2</sub> ) <sub>2</sub> NH	C	C	C	C		X	A		B	B	A	A	A		A
Diethyl Benzene C <sub>6</sub> H <sub>4</sub> (C <sub>2</sub> H <sub>5</sub> ) <sub>2</sub>	X	X	X	X		A	A	C							
Diethyl Carbonate (C <sub>2</sub> H <sub>5</sub> O) <sub>2</sub> CO		X	X				A			A					
Diethyl Ether (Ether) (CH <sub>3</sub> CH <sub>2</sub> ) <sub>2</sub> O	A	C	B	X	C	X	A	B	B	A	A	A	X	A	A
Diethyl Phthalate (DEP) C <sub>6</sub> H <sub>4</sub> (CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> ) <sub>2</sub>			X			C	A		A	A	A	A			
Diethyl Sebecate C <sub>14</sub> H <sub>26</sub> O <sub>4</sub>		X	X	C	A	B	A	B	A	A	A	A	A <sup>120°</sup>		A <sup>120°</sup>
Diethylene Ether (Dioxane) C <sub>4</sub> H <sub>8</sub> O <sub>2</sub>		X	X	A		X	A		A	A	A				

Rating specific to % of concentration. Temperature shown is °F. Where not shown, temperature is 70°F (21°C) Ambient.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Diethylene Glycol (DEG) HOCH <sub>2</sub> CH <sub>2</sub> OCH <sub>2</sub> •CH <sub>2</sub> OH	X	A	A	A	A	A	A	A	A	A	A	A	A		
Diethylene Triamine (NH <sub>2</sub> C <sub>2</sub> H <sub>4</sub> ) <sub>2</sub> NH			B						A	A	A	A			
Diisobutyl Ketone C <sub>4</sub> H <sub>9</sub> COC <sub>4</sub> H <sub>9</sub>		X	X	B		X	A		A	A	A	A			
Diisobutylene [HC=C(CH <sub>3</sub> ) <sub>2</sub> ] <sub>2</sub>		C	B			C	A	C					A		A
Diisodecyl Adipate (DIDA) C <sub>26</sub> H <sub>50</sub> O <sub>4</sub>			X			C	A								
Diisodecyl Phthalate (DIDP) C <sub>26</sub> H <sub>47</sub> O <sub>4</sub>		X	X	A		C	A								
Diisooctyl Adipate (DIOA) C <sub>22</sub> H <sub>42</sub> O <sub>4</sub>			X			C	A		A	A	A	A			
Diisooctyl Phthalate (DIOP) C <sub>24</sub> H <sub>39</sub> O <sub>4</sub>			X			C	A								
Diisooctyl Sebecate (DIOS) C <sub>26</sub> H <sub>46</sub> O <sub>4</sub>				B		A	A								
Diisopropyl Amine [(CH <sub>3</sub> ) <sub>2</sub> CH] <sub>2</sub> NH			B				A								
Diisopropyl Benzene C <sub>6</sub> H <sub>4</sub> •[CH(CH <sub>3</sub> ) <sub>2</sub> ] <sub>2</sub>		X	X	X		A	A	C							
Diisopropyl Ketone [(CH <sub>3</sub> ) <sub>2</sub> CH] <sub>2</sub> CO		X	X	A		X	A	C			A				
N,N-Dimethylaniline C <sub>6</sub> H <sub>5</sub> N(CH <sub>3</sub> ) <sub>2</sub>		X	X	C		X	A	B	B	B			X		A
Dimethyl Ether CH <sub>3</sub> OCH <sub>3</sub>		B	A			A	A		B	B	B	B			
N,N-Dimethyl Formamide (DMF) HCON(CH <sub>3</sub> ) <sub>2</sub>		X	C		C	X	A	A	A		A	A	A <sup>120°</sup>	B	A <sup>120°</sup>
Dimethyl Phthalate C <sub>6</sub> H <sub>4</sub> (CO <sub>2</sub> CH <sub>3</sub> ) <sub>2</sub>		X	X	C	A	C	A	A							A <sup>70°</sup>
Dimethyl Sulfate (CH <sub>3</sub> ) <sub>2</sub> SO <sub>4</sub>			X			X	A			A					
Dimethyl Sulfide (CH <sub>3</sub> ) <sub>2</sub> S			X				A		A	A	A	A			
Dinitrotoluene (DNT)CH <sub>3</sub> C <sub>6</sub> H <sub>3</sub> (NO <sub>2</sub> ) <sub>2</sub>		X	X	X		C	A	B			A				
Diethyl Phthalate (DOP) C <sub>24</sub> H <sub>38</sub> O <sub>4</sub>	X	X	X	B	A	B	A	C	A	A	A	A			
Diethyl Sebecate C <sub>26</sub> H <sub>50</sub> O <sub>4</sub>	C	X	X	C		C	A	C	A	A	A	A			
Dioxolanes (Dioxolans) Glycol ethers		X	X	B		C	A	C							
Dipentene (Limonene) C <sub>10</sub> H <sub>16</sub>		X	C	X		A	A	C	A	A	A	A			
Diphenyl Oxides (Phenyl Ether) C <sub>6</sub> H <sub>5</sub> OC <sub>6</sub> H <sub>5</sub>	C	X	X	C		A	A	C	B	A	A	A			A
Dipropylamine (CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> ) <sub>2</sub> NH			B				A								

RATING KEY: (A) Excellent (B) Good (C) Fair to Poor (X) Not Recommended  No Data Available.

CHEMICAL Formula	ELASTOMERS							METAL PARTS				PLASTICS			
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Dipropylene Glycol (C <sub>3</sub> H <sub>6</sub> OH) <sub>2</sub> O			A			A	A					A		A	
Dipropyl Ketone (Butyrene) (C <sub>3</sub> H <sub>7</sub> ) <sub>2</sub> CO			X				A								
Dispersing Oil #10		X	X	X		C	A		A	A	A				
Divinyl Benzene (DVB) C <sub>6</sub> H <sub>4</sub> (CH=CH <sub>2</sub> ) <sub>2</sub>			X			A	A								
Dodecyl Benzene (Alkane) C <sub>6</sub> H <sub>5</sub> (CH <sub>2</sub> ) <sub>11</sub> CH <sub>3</sub>			X			A	A		A	A	A				
Dow Corning® (Silicones) [(CH <sub>3</sub> ) <sub>2</sub> SiO] <sub>2</sub>	A	A	A			A	A		A						
Dowtherm®(Biphenyl & Phenyl Ether) (C <sub>6</sub> H <sub>5</sub> ) <sub>2</sub> and (C <sub>6</sub> H <sub>5</sub> ) <sub>2</sub> O	C	X	X	X		A	A	X	A	B	A	A			
Drycleaning Fluids Chlorinated hydrocarbons		X	C			A	A	X	A	A	A		X		
Dyes			C						B	B		A			
Epichlorohydrin C <sub>3</sub> H <sub>5</sub> ClO		X	X	B	X	X	A	B	X	A	A	A	A	A	X
Epsom Salts (Magnesium Sulfate) MgSO <sub>4</sub> • 7H <sub>2</sub> O		A	A			A	A	A	A		A	B	A		A
Ethane C <sub>2</sub> H <sub>6</sub>	C	C	A	X		A	A	C	A	A	A	A	C	A	
Ethanolamine (Aminoethanol) H <sub>2</sub> NCH <sub>2</sub> • CH <sub>2</sub> OH	X	C	B	B		X	A	A	B	A	A		X	X	C
Ethyl Acetate CH <sub>3</sub> COOC • H <sub>2</sub> CH <sub>3</sub>	X	X	X	B	C	X	A	C	A	A	A	A	C	A	A
Ethyl Acetoacetate (Acetoacetic Ester) CH <sub>3</sub> COCH <sub>2</sub> • COOCH <sub>2</sub> CH <sub>3</sub>	C	X	X	C		X	A	C	A	A	A	A			A <sup>70°</sup>
Ethyl Acrylate CH <sub>2</sub> CHCO <sub>2</sub> • CH <sub>2</sub> CH <sub>3</sub>	X	X	X	C		X	A	C	A	A	A	A	B		B <sup>70°</sup>
Ethyl Alcohol (Ethanol) CH <sub>3</sub> CH <sub>2</sub> OH	X	A	A		X	B	A		B	B	A	A	A <sup>100°</sup>		A
Ethyl Aluminum Dichloride CH <sub>3</sub> CH <sub>2</sub> AlCl <sub>2</sub>			X			B	A								
Ethyl Amine (Monoethylamine) CH <sub>3</sub> CH <sub>2</sub> NH <sub>2</sub>		C	X	A		X	A		B	B	A				
Ethyl Benzene CH <sub>3</sub> CH <sub>2</sub> C <sub>6</sub> H <sub>5</sub>	X	X	X	X		A	A	C	B	B	B	A	X	A	A
Ethyl Benzoate C <sub>6</sub> H <sub>5</sub> CO <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>		X	X	C		A	A	C	A	A	A	A	B		
Ethyl Bromide (Bromoethane) CH <sub>3</sub> CH <sub>2</sub> Br		B	X	B			A	X	A	A	A				
Ethyl Butyl Acetate CH <sub>3</sub> CO <sub>2</sub> CH <sub>2</sub> • CH(C <sub>2</sub> H <sub>5</sub> ) <sub>2</sub>			X			X	A								
Ethyl Butyl Alcohol CH <sub>3</sub> CH(C <sub>2</sub> H <sub>5</sub> ) • (CH <sub>2</sub> ) <sub>2</sub> OH			A			B	A								
Ethyl Butyl Ketone CH <sub>3</sub> CH <sub>2</sub> COC <sub>4</sub> H <sub>9</sub>			X			X	A								

Rating specific to % of concentration. Temperature shown is °F. Where not shown, temperature is 70°F (21°C) Ambient.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Ethyl Butyraldehyde C <sub>6</sub> H <sub>12</sub> O			X			X	A								
Ethyl Butyrate CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> • C <sup>140°</sup> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>		X	X	X		C	A		B	A	A	A	B		
Ethyl Caprylate CH <sub>3</sub> (CH <sub>2</sub> ) <sub>6</sub> • CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>			X	X	X										
Ethyl Cellosolve® C <sub>2</sub> H <sub>5</sub> O(CH <sub>2</sub> ) <sub>2</sub> OH		C	C	B		X	A	B							
Ethyl Cellulose (Ethocel®)	B	B	B	B	B	C	A	A	B	A	B	B	C		
Ethyl Chloride (Chloroethane) C <sub>2</sub> H <sub>5</sub> Cl	C	C	A	A	X	A	A	C	X	B	A	B	X	A	A
Ethyl Chlorocarbonate (Ethyl Chloroformate) ClCO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>		C				A	A	A							
Ethyl Cyanide (Propionitrile) C <sub>2</sub> H <sub>5</sub> CN		B	X	A		X	A								
Ethyl Formate HCOOCH <sub>2</sub> CH <sub>3</sub>		B	X	C		A	A	B	B	A	B	B			
Ethylhexyl Acetate CH <sub>3</sub> CO <sub>2</sub> CH <sub>2</sub> • CH(C <sub>2</sub> H <sub>5</sub> )C <sub>2</sub> H <sub>5</sub>			X			X	A								
Ethylhexyl Alcohol (Ethylhexanol) C <sub>8</sub> H <sub>17</sub> OH			A			B	A		A	A	A	A			
Ethyl Iodide CH <sub>3</sub> CH <sub>2</sub> I		X	X	C		B	A								
Ethyl Isobutyrate (CH <sub>3</sub> ) <sub>2</sub> • CHCOOCH <sub>2</sub> CH <sub>3</sub>		X	X	X			A								
Ethyl Mercaptan (Ethanethiol) CH <sub>3</sub> CH <sub>2</sub> SH		C	X	X		B	A	C	B	A	B	B			
Ethyl Oxalate C <sub>2</sub> H <sub>5</sub> O <sub>2</sub> C • CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>	A	X	X	A		B	A	B							
Ethyl Pentachlorobenzene C <sub>2</sub> H <sub>5</sub> C <sub>6</sub> Cl <sub>5</sub>		X	X			A	A	X	X				X		
Ethyl Propionate CH <sub>3</sub> CH <sub>2</sub> • COOCH <sub>2</sub> CH <sub>3</sub>		X	X	X			A		A	A	A	A			
Ethyl Silicate Si(OCH <sub>2</sub> CH <sub>3</sub> ) <sub>4</sub>		A	A	A		A	A	B	B	A	A	A			
Ethyl Sulfate C <sub>2</sub> H <sub>5</sub> OSO <sub>2</sub> OH			A			A	A	B			X				
Ethylene (Ethene) C <sub>2</sub> H <sub>4</sub>		A	B	C		A	A	C	A	A	A				
Ethylene Chlorohydrin ClCH <sub>2</sub> CH <sub>2</sub> OH	X	B	X	A	X	B	A	C		B	A	A	X		A <sup>70°</sup>
Ethylene Diamine (CH <sub>2</sub> ) <sub>2</sub> (NH <sub>2</sub> ) <sub>2</sub>		A	B	A		X	A	A	C	A	A	A	A	A	B
Ethylene Dibromide (Ethylene Bromide) Br(CH <sub>2</sub> ) <sub>2</sub> Br		X	X	C		B	A		X	X	B	B	X		A
Ethylene Dichloride (Dutch Oil) Cl(CH <sub>2</sub> ) <sub>2</sub> Cl	X	X	X	X	X	B	A	X	X	B	B	B	X	B	A

RATING KEY: (A) Excellent (B) Good (C) Fair to Poor (X) Not Recommended □ No Data Available.



CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Ethylene Glycol (Ethylene Alcohol) (Glycol) $(CH_2OH)_2$	B	A	A	A	A	A <sup>70°</sup>	A	A	A	A	A	A	A <sup>120°</sup>	A	A
Ethylene Glycol Monobutyl Ether (Butyl Cellosolve®) $C_4H_9OCH_2CH_2OH$	X	X	B	B		C	A		A	A	A	A			
Ethylene Glycol Monoethyl Ether Acetate (Cellosolve Acetate®) $C_2H_5O(CH_2)_2 \cdot O_2CCH_3$	X	X	C	B		C	A		A	A	A	A			
Ethylene Glycol Monomethyl Ether (Methyl Cellosolve®) $CH_3O(CH_2)_2OH$	X	C	C	B		X	A		B	B	A	A			
Ethylene Oxide $(CH_2)_2O$	X	X	X	X	A	C	A	A	A	B	A	A	C		A
Ethylene Trichloride (Trichloroethene) $C_2HCl_3$		X	X	X		A	A	X	X	A	A		X		
Ethylidene Chloride $CH_3CHCl_2$		X	X	X			A		X	B	A	B			
Fatty Acids $C_nH_{2n+1}COOH$		C	B	X	B	A	A	B	90%A	X	A	A	B	A	A
Ferric Chloride $FeCl_3$	A	A	A	A	X	A	A	A	X	X	X	10%A	A	A	A
Ferric Hydroxide $FeHO_2$			B			C	A				A	10%B			
Ferric Nitrate $Fe(NO_3)_3$	A	A	A	A		A	A	A	X	X	B	10%A	A	A	A
Ferric Sulfate $Fe_2(SO_4)_3$		A	A	A		A	A	A	C	X	B	30%A	A	B	A
Ferrous Chloride $FeCl_2$		A	A	A	X	A	A	A	X	X	30%B	50%B	A	B	A
Ferrous Sulfate $FeSO_4$		A	A	A	A	A	A	A	10%A	C	B	30%A	A	B	A
Fish Oil			A			A	A	B							
Fluoboric Acid (Fluoroboric Acid) $HF_4$		B	A	A	X	C	A	A	X	X	30%A		A		A
Fluorine (Liquid) $F_2$		C	X	C	X	B	A	X	A		A		X		A <sup>70°</sup>
Fluorobenzene $FC_6H_5$		X	X	X		A	A	C					X		
Fluorolube (Fluorocarbon Oils) $F_xC_yH_z$		A	C	A		B	A	X	A	A	A	A	X		
Fluosilicic Acid (Sand Acid) $H_2SiF_6$	B	A	B	B	B	A	A	A	X	X	A <sup>212°</sup>	B	A		A
Formaldehyde (Formalin) HCHO	X	C	B	A	40%C	A	A	B	A	C	90%A	70%A	A	A	A <sup>120°</sup>
Formamide HCONH <sub>2</sub>		A	A	A		X	A		A	B	B	B			
Formic Acid HCOOH	X	B	C	B	C	C	A	A	X	X	C	A	A <sup>70°</sup>	X	A

Rating specific to % of concentration. Temperature shown is °F. Where not shown, temperature is 70°F (21°C) Ambient.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Freon 11 (Trichlorofluoromethane) CCl <sub>3</sub> F	X	C	C	X	A	B	A	X	B	A	A		B		A
Freon 12 (Dichlorodifluoromethane) Cl <sub>2</sub> CF <sub>2</sub>	A	B	B	B	A	B	A	X	A	A	A				A
Freon 13 (Chlorotrifluoromethane) ClCF <sub>3</sub>		A	A	A	C	A	A	X	A	A	A	A			
Freon 13B1 (Bromotrifluoromethane) BrCF <sub>3</sub>	A	A	A	A		A	A								
Freon 14 (Tetrafluoromethane) CF <sub>4</sub>		X	X	B			A								
Freon 21 (Dichlorofluoromethane) FCHCl <sub>2</sub>		B	X	X		X	A	X	A						A
Freon 22 (Chlorodifluoromethane) HCClF <sub>2</sub>	X	B	X	C	X	X	A	X	A	A	A	A			A
Freon 113 (Trichlorotrifluoroethane) (TF) Cl <sub>3</sub> CCF <sub>3</sub>	C	A	B	X	A	B	A	X	B		A				A
Freon 114 (Dichlorotetrafluoroethane) C <sub>2</sub> Cl <sub>2</sub> F <sub>4</sub>	A	A	A	C	A	A	A	X	B		A				A
Freon 114B2 (Dibromotetrafluoroethane) C <sub>2</sub> Br <sub>2</sub> F <sub>4</sub>		A	B	X		B	A	X							
Freon 115 (Chloropentafluoroethane) C <sub>2</sub> ClF <sub>5</sub>		A	A	A		B	A	X	A						
Fruit Juices Water, sucrose		A	A	A	B	A	A	A	0%A	X	A	A	A		A
Fuel Oils (ASTM #1 thru #9) Hydrocarbons	C	C	A	X	B	A	A	C	A	A	A	A	C	C	A
Fumaric Acid (Boletic Acid) HOOCCH = CHCOOH		B	C			A	A	A							
Furan (Furfuran) C <sub>4</sub> H <sub>4</sub> O		X	X	X	X	C	A	C					C		X
Furfural (Ant Oil) C <sub>5</sub> H <sub>4</sub> O <sub>2</sub>	X	B	X	B		C	A	C	A	B	20%A	B	X	B	B <sup>120°</sup>
Furfuryl Alcohol C <sub>5</sub> H <sub>6</sub> O <sub>2</sub>	X		X	B	B	X	A		A	A	A	A			B <sup>100°</sup>
Fusel Oil (Grain Oil) (CH <sub>2</sub> ) <sub>2</sub> • CHCH <sub>2</sub> CH <sub>2</sub> OH	C	A	A	A		A	A								
Gallic Acid C <sub>6</sub> H <sub>2</sub> (OH) <sub>3</sub> • COOH	X	C	B	B	X	A	A	B	20%A	X	B	B	A <sup>70°</sup>		A <sup>70°</sup>
Gasoline (Unleaded) C <sub>4</sub> to C <sub>12</sub> • Hydrocarbons	X	X	X	X		A	A	C	A	A	A	A	C	A	A
Gasoline (Petrol) Hydrocarbons	B	C	A	X	A	A	A	C	A	A	A	A	C	A	A
Gelatin Water soluble Proteins	A	A	A	A	B	B	A	A	A	A	A		A	B	A
Ginger Oil C <sub>17</sub> H <sub>26</sub> O <sub>4</sub>		A				A	A	C		X	A				

RATING KEY: (A) Excellent (B) Good (C) Fair to Poor (X) Not Recommended  No Data Available.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Glauber's Salt (Sodium Sulfate Decahydrate) Na <sub>2</sub> SO <sub>4</sub> •10H <sub>2</sub> O	A	A	A	B	B	A	A								
Gluconic Acid C <sub>6</sub> H <sub>12</sub> O <sub>7</sub>			C			A	A		B	C	50%A		A		
Glucose (Corn Syrup) C <sub>6</sub> H <sub>12</sub> O <sub>6</sub>	A	A	A	A	B	A	A	A	A	A	A		A	A	A
Glue (PVA)	A	A	A	B	B	A	A	A	A	A	B	A	A	B	
Glycerol (Glycerine) C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	A	A	A	A	A	A	A	A	A	B	A	A	A	A	A
Glycolic Acid HOCH <sub>2</sub> COOH		A	A			A		A				A	A		A
Glycols		A	A			A	A	A	B	B	B		A	A	A
Gold Monocyanide AuCN		A	A			A		A			X	A			
Grape Juice Water, sucrose		X	C			A	A	A		X	A		A		A
Grapefruit Oil	A	X	X				A			X	A				
Grease Hydrocarbons		X	A		A	A	A	B	A		A				
Green Sulfate Liquor		B	B	A	X	A	A	A	B	C	A	B	A		
Halowax Oil Chlorinated naphthalenes		X	X	X		A	A	X	X						
Heptanal CH <sub>3</sub> (CH <sub>2</sub> ) <sub>5</sub> CHO			A			A			A	A	A	A	A		
Heptane C <sub>7</sub> H <sub>16</sub>	B	C	A	X		A	A	C	A	A	A	A	C <sup>140°</sup>	A	A
Hexanal CH <sub>3</sub> (CH <sub>2</sub> ) <sub>4</sub> CHO	C	A	X	B		C	A		A	B	A	B			
Hexalin (Cyclohexanol) C <sub>6</sub> H <sub>11</sub> OH		A	B	C		A	A								
n-Hexane C <sub>6</sub> H <sub>14</sub>	B	B	A	X	A	A	A	A	A	A	A	A	C <sup>140°</sup>	C	A
n-Hexane 1 (Hexylene) H <sub>2</sub> CCH(CH <sub>2</sub> ) <sub>3</sub> CH <sub>3</sub>	A	B	A	X		A	A	C							
Hexyl Alcohol (1-Hexanol) C <sub>6</sub> H <sub>13</sub> OH	X	B	A	C		A	A		A	A	A				A
Hexylene Glycol (Brake Fluid) C <sub>6</sub> H <sub>12</sub> (OH) <sub>2</sub>		A	A	C		A	A		A	A	A	A			
Honey		A							A	A	A		A		
Hydraulic Oil (Petroleum Base) Hydrocarbons	A	B	A	X	X	A	A	X	A	A	A	A	X	C	
Hydrazine (Diamine) H <sub>2</sub> NNH <sub>2</sub>	X	C	C	A	X	X	A	A	A	X	A	A	X	B	X
Hydrobromic Acid HBr	X	C	X	A		A	A	B	A	A	A		B	X	A
Hydrochloric Acid 10% (Muratic) HCl	B	B	B	A		A	A	A	X	C	X	B	A	X	A
Hydrochloric Acid 20% (Muratic) HCl	B	B	B	A	C	A	A	A	X	C	X	A	A	X	A

Rating specific to % of concentration. Temperature shown is °F. Where not shown, temperature is 70°F (21°C) Ambient.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Hydrochloric Acid 30% (Conc.) HCl	X	C	C	A	X	B	A		X	X	X	A	B	X	A
Hydrocyanic Acid (Formonitrile) HCN	C	C	B	A	X	A	A	B	10%A	X	A	B	A	X	A
Hydrogen Fluoride — Anhydrous HF	C	C	X	C		A	A		X		X	A	A		A
Hydrofluoric Acid (Conc.) Cold HF *SEE NOTE BELOW	X	C		C	X	B	A	X	C	X	X	B	40%A	X	A
Hydrogen Peroxide — 3% H <sub>2</sub> O <sub>2</sub>		B	B	B	X	A	A	A	A				A		A
Hydrogen Peroxide — 10% H <sub>2</sub> O <sub>2</sub>		C	C	B	X	A	A		A	B	A	A	A		A
Hydrogen Peroxide — 30% H <sub>2</sub> O <sub>2</sub>		X	C	B	X	A	A		A	X	B	A	A		A
Hydrogen Peroxide — 90% H <sub>2</sub> O <sub>2</sub>	C	B	X	C	X	A	A		A	X	A				
Hydrogen Sulfide (Wet) H <sub>2</sub> S		C	X	A	A	X	A	A	90%A	X	A <sup>167°</sup>	A <sup>167°</sup>	A	C	A
Hydroquinone C <sub>6</sub> H <sub>4</sub> (OH) <sub>2</sub>		X	C			C	A	A	90%A	B	10%A	B			A
Hydroxyacetic Acid — 10% HOCH <sub>2</sub> COOH		X	X				A	70%A	B		B				
Hypochlorous Acid HClO		X	X	B		A	A	A	X	X	X	A	A		A
Ink	A	A			A			C	X	A	A				
Iodine I <sub>2</sub>		B	B	B	B	A	A	A	A	X	X	A	A		A <sup>150°</sup>
Iodoform CHI <sub>3</sub>				A			A	B	A	A	A	A			A
Isoamyl Acetate CH <sub>3</sub> CO <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH • (CH <sub>3</sub> ) <sub>2</sub>	X	X	X	B		X	A		A	A	A	A			
Isoamyl Alcohol (CH <sub>3</sub> ) <sub>2</sub> • CHCH <sub>2</sub> CH <sub>2</sub> OH	C	A	A	A		A	A								
Isoamyl Butyrate C <sub>9</sub> H <sub>18</sub> O <sub>2</sub>			X			X	A		A	A	A	A			
Isoamyl Chloride (CH <sub>3</sub> ) <sub>2</sub> CHCH <sub>2</sub> CH <sub>2</sub> Cl		X	X	X		A	A		X						
Isobutyl Acetate CH <sub>3</sub> CO <sub>2</sub> CH <sub>2</sub> • CH(CH <sub>3</sub> ) <sub>2</sub>		X	X	C		X	A		A	A	A	A			
Isobutyl Alcohol (Isobutanol) (CH <sub>3</sub> ) <sub>2</sub> • CHCH <sub>2</sub> OH	X	B	B	A		A	A		A				A	A	A
Isobutyl Amine (CH <sub>3</sub> ) <sub>2</sub> • CHCH <sub>2</sub> NH <sub>2</sub>			X			X	A								
Isobutyl Chloride (CH <sub>3</sub> ) <sub>2</sub> • CHCH <sub>2</sub> Cl			X			B	A		X	B	B	90%A			
Isobutyric Acid (CH <sub>3</sub> ) <sub>2</sub> • CHCOOH		B	X	A			A		A						
Isododecane (CH <sub>3</sub> ) <sub>2</sub> • CH(CH <sub>2</sub> ) <sub>8</sub> CH <sub>3</sub>	B	A	B	X		A	A		B	B	B	B			

\*NOTE: Glass-filled Polypropylene pump components are not compatible with Hydrofluoric Acid. Please consult factory for specific details..

RATING KEY: (A) Excellent (B) Good (C) Fair to Poor (X) Not Recommended □ No Data Available.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Isooctane (Trimethylpentane) C <sub>8</sub> H <sub>18</sub>	B	B	A	X	A	A	A	C	A	A	A	A	A		A
Isopentane (CH <sub>2</sub> ) <sub>2</sub> CHCH <sub>2</sub> CH <sub>3</sub>			A			A	A								
Isophorone C <sub>9</sub> H <sub>14</sub> O	C	X	X	C		X	A	B	A	A	A	A			
Isopropyl Acetate CH <sub>3</sub> COOCH <sub>2</sub> (CH <sub>3</sub> ) <sub>2</sub>	A	X	X	B		X	A	B	A	A	A	A	B		
Isopropyl Alcohol (Isopropanol) CH <sub>3</sub> CH(OH)CH <sub>3</sub>	X	A	B	B	A	A	A		90%A	A	A	A	A	A	A
Isopropyl Amine C <sub>3</sub> H <sub>7</sub> NH <sub>2</sub>			X			X	A			A	A				
Isopropyl Chloride (CH <sub>3</sub> ) <sub>2</sub> CHCl	X	X	X	X		B	A	C	X	A	A	A	X		
Isopropyl Ether (CH <sub>3</sub> ) <sub>2</sub> CHOCH • (CH <sub>3</sub> ) <sub>2</sub>	C	C	C	X		C	A	C	B		A		X		A <sup>70°</sup>
Jet Fuels (JP1 to JP6) (ASTM-A, A1 & B)	C	C	A	X	A	A	A	C	A	A	A	A	X	A	A
Kerosine (Kerosene) Hydrocarbons	C	C	A	X	A	A	A	C	A	A	A	A	X	A	A
Lacquers	X	X	X	X	X	X	A	C	A	B	A	A		B	
Lacquer Solvents	X	X	X	X	C	X	A	C	A	B	A	A	C	B	X
Lactic Acid CH <sub>3</sub> CHOH • COOH		B	B	A	X	A	A	A	A	X	70%A	60%A	A	C	A
Lactol (Aliphatic Naptha Solvent) CH <sub>3</sub> CHOH • CO <sub>2</sub> C <sub>10</sub> H <sub>7</sub>		X	C			A	A		A	A	A	A			
Lard (Lard Oil) Olein, stearin	A	C	A	X	B	A	A	B	A	A	B	A	A	B	A
Latex Rubber emulsion		A	A				A		A		A		A	C	
Lauryl Alcohol (n-Dodecanol) CH <sub>3</sub> (CH <sub>2</sub> ) <sub>10</sub> • CH <sub>2</sub> OH			A			B		A	A	A	A	A			
Lavender Oil Ester mixture		X	B	X		B	A	B							
Lead Acetate (Sugar of Lead) Pb(CH <sub>3</sub> CO <sub>2</sub> ) <sub>2</sub>	X	A	B	A		X	A	A	X		B	B	A	A	A
Lead Chloride PbCl <sub>2</sub>		B					A		X		B	B	A		A
Lead Nitrate Pb(NO <sub>3</sub> ) <sub>2</sub>		A	B	A		A	A		X	B	B	B	A		A
Lead Sulfamate			A	B					A					A	
Lemon Oil (Cedro Oil) Hydrocarbons			C						C	A		A			
Ligroin (Ligroine) (Benzene) Petroleum fraction		B	A	X		A	A	B		A	A		X		
Lignin Liquor Blend of natural aromatic oils		A	A			A	A				A				

Rating specific to % of concentration. Temperature shown is °F. Where not shown, temperature is 70°F (21°C) Ambient.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Lime, Soda (Slaked Lime & Soda Ash) CaO	C	B	B	A		B	A	A							
Lime Bleach		C	A	A		A	A	A	X				B		
Lime Slurries		A	B		C	B	A		B		B				
Lime Sulfur CaS+CaSO <sub>4</sub>		A	A	A		A	A	B	X		A		A		
Limonene C <sub>10</sub> H <sub>16</sub>		X	C	X		A	A								
Linoleic Acid C <sub>18</sub> H <sub>32</sub> O <sub>2</sub>		X	B	X		B	A	B	A		A	A	A		A
Linseed Oil (Flaxseed Oil) Glycerides	B	A	A	C	B	A	A	B	A	A	A	A	A	A	A
Lindol (Tritolyl Phosphate) C <sub>21</sub> H <sub>21</sub> O <sub>4</sub> P		C	X			B	A	A							
Lithium Bromide LiBrH <sub>2</sub> O		X	A			A	A			A					A
Lubricating Oils (Petroleum) Hydrocarbons	C	B <sup>150°</sup>	A	X	A	A	A	X	A	A	A	A	C	A	A
Lye (Potassium Hydroxide) KOH		B	C		C	B	A	A			A		A	X	A <sup>150°</sup>
Magnesium Carbonate MgCO <sub>3</sub>		A	A	C	A	A	A	A	A	B	B	B	A	A	A
Magnesium Chloride MgCl <sub>2</sub> O	A	A	A	A	A	A	A	A	20%A	30%B	50%B	A	A	B	A
Magnesium Hydroxide (Milk of Magnesia) Mg(OH) <sub>2</sub>	A	B	B	A	C	A	A	A	10%A	A	A	A	A	A	A
Magnesium Nitrate Mg(NO <sub>3</sub> ) <sub>2</sub> • 6H <sub>2</sub> O		A	A	A		A	A	A	50%B	B	A	B	A		A
Magnesium Oxide MgO		A	A			B	A	A	10%A	A	A	A			
Magnesium Sulfate (Epsom Salts) MgSO <sub>4</sub> • 7H <sub>2</sub> O		A	A	A	B	A	A	A	70%A	A	50%A	A	A	A	A
Maleic Acid (CHCOOH) <sub>2</sub>		A	X	X		A	A	A	20%A	60%B	B	A	A		A
Maleic Anhydride C <sub>4</sub> H <sub>2</sub> O <sub>3</sub>				X		A	A	A	20%A	B	A	A			
Malic Acid (Apple Acid) C <sub>4</sub> H <sub>6</sub> O <sub>5</sub>		C	B	X		A	A	A	B		A	B <sup>212°</sup>			
Maple Sugar Liquors (Sucrose) Water, sucrose	X	A	A	A		A	A				A				
Mayonnaise Water, fats, oils		A	A				A	A	X	X	A	A	A		
Mercuric Chloride HgCl <sub>2</sub>		B	A	A		A	A	A	X	X	X	30%B	A	B	A
Mercuric Cyanide Hg(CN) <sub>2</sub>		B	B	A		A	A	A	X	B	B	B	A		A
Mercurous Nitrate Hg <sub>2</sub> (NO <sub>3</sub> ) <sub>2</sub> • 2H <sub>2</sub> O		B	B	A		A	A		X	B	B <sup>212°</sup>	B	A		A

RATING KEY: (A) Excellent (B) Good (C) Fair to Poor (X) Not Recommended  No Data Available.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Mercury Hg	A	A	A	A	A	A	A	A	X	A	A	A	A	C	A
Mesityl Oxide (CH <sub>3</sub> ) <sub>2</sub> C = CHCOCH <sub>3</sub>		X	X	B		X	A	C	A	A	A	A			
Methane CH <sub>4</sub>	C	B	A	X	B	A	A	C	A	A	A	A	B	A	A
Methyl Acetate CH <sub>3</sub> CO <sub>2</sub> CH <sub>3</sub>		C	X	C	C	X	A	B	A	A	A	A	C	B	
Methyl Acetoacetate CH <sub>3</sub> COCH <sub>2</sub> • COOCH <sub>3</sub>			X			X	A			A	A	A			
Methyl Acrylate CH <sub>2</sub> CHCO <sub>2</sub> CH <sub>3</sub>		C		C		X	A	B		A	A				A <sup>70°</sup>
Methyl Acrylic Acid (Crotonic Acid) CH <sub>3</sub> (CH) <sub>2</sub> COOH		C		C		X	A								
Methyl Alcohol (Methanol) CH <sub>3</sub> OH	X	A	A	A	A	B	A	A	B	A	A	A	A	A	A
Methyl Amine (Monomethylamine) CH <sub>3</sub> NH <sub>2</sub>		A	B	A		<sup>90%</sup> A	A		B	B	A	B	X		C
Methyl Amyl Acetate C <sub>8</sub> H <sub>16</sub> O <sub>2</sub>			A			X	A		A	A	A	A			
Methyl Amyl Alcohol C <sub>8</sub> H <sub>13</sub> OH			A			X	A		A	A	A	A			
Methyl Aniline C <sub>6</sub> H <sub>5</sub> NH(CH <sub>3</sub> )		A	A	A			A								
Methyl Bromide (Bromo Methane) CH <sub>3</sub> Br		X	C	A	X	A	A	X	X	A	A	B	X		A
Methyl Butyl Ketone (2-hexanone) CH <sub>3</sub> COC <sub>4</sub> H <sub>9</sub>		X	X	B		X	A	C			A		X		
Methyl Butyrate CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> • CO <sub>2</sub> CH <sub>3</sub>		X	X	X			A		A	A	A	A			
Methyl Cellosolve® CH <sub>3</sub> OCH <sub>2</sub> • CH <sub>2</sub> OH		X	X			X	A	B	A				A		A
Methyl Chloride CH <sub>3</sub> Cl	X	X	X	C	X	B	A	X	X	A	A	A	X	B	A
Methyl Cyclopentane C <sub>6</sub> H <sub>12</sub>		X	B	X		A	A	C			A				
Methyl Dichloride CH <sub>2</sub> Cl <sub>2</sub>		X	X			A		X	X				X		
Methyl Ethyl Ketone (Butanone) CH <sub>3</sub> CO • CH <sub>2</sub> CH <sub>3</sub>	X	X	X	A	C	X	A	B	A	A	A	A	X	B	X
Methyl Formate HCOOCH <sub>3</sub>		B	X	C		X	A	B	A	A	A				
Methyl Hexane C <sub>7</sub> H <sub>16</sub>		A	A	X		A	A								
Methyl Iodide CH <sub>3</sub> I		X	X	A			A		X	A	A	A			

Rating specific to % of concentration. Temperature shown is °F. Where not shown, temperature is 70°F (21°C) Ambient.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Methyl Isobutyl Ketone (Hexone) $\text{CH}_3\text{COCH}_2\text{CH}(\text{CH}_3)_2$		X	X	C	X	X	A	C	A	B	B	A	C <sup>70°</sup>	A	A <sup>70°</sup>
Methyl Isopropyl Ketone $\text{CH}_3\text{COCH}(\text{CH}_3)_2$		X	X	C	X	X	A	C			A		C		A <sup>70°</sup>
Methyl Methacrylate $\text{CH}_2\text{C}(\text{CH}_3)\text{CO}_2\text{CH}_3$		X	X	X		C	A	B	B		A				A <sup>70°</sup>
Methyl Oleate $\text{C}_{19}\text{H}_{36}\text{O}_2$		X	X	C		B	A	C							
Methyl Propyl Ketone $\text{CH}_3\text{CH}_2\text{CH}_2\text{COCH}_3$		X	X	B		X	A								
Methyl Salicylate (Betula Oil) $\text{HOC}_6\text{H}_4\text{COOCH}_3$		X	X	C		B	A	B	A	A					
Methylacrylic Acid $\text{CH}_3\text{CHCHCO}_2\text{H}$		B				B	A	A							
Methylamine $\text{CH}_3\text{NH}_2$		A	B	A		<sup>90%</sup> A	A	A	B	B	A	B	A		
Methylene Bromide $\text{CH}_2\text{Br}_2$		X	X			B	A		X	A	A	A			A
Methylene Chloride $\text{CH}_2\text{Cl}_2$	X	X	X	X	X	B	A	X	X	B	<sup>90%</sup> A	A	X		B <sup>100°</sup>
Milk	X	A	B	A	B	A	A	A	A	X	A	A	A	A	A
Mine Water			A				A		B		B	A			
Mineral Oil (Petroleum) Hydrocarbons	A	B	A	X	A	A	A	C	A	A	A	A	B	A	A
Mixed Acids (Sulfuric & Nitric) $\text{H}_2\text{SO}_4, \text{HNO}_3$	X	X	X	B		A	A		X	X	B	B	X		A
Molasses	X	A	A	A	B	A	A	A	A	A	A	A	A	B	A
Monochlorobenzene $\text{C}_6\text{H}_5\text{Cl}$		X	X		C	A	A	C	X	A	A		X	A	A <sup>100°</sup>
N-Methyl Aniline $\text{C}_6\text{H}_5\text{NHCH}_3$		X	X			C	A						C		
Monoethanolamine $\text{NH}_2\text{C}_2\text{H}_4\text{OH}$		C	B			C	A	A	B	A	A		X	X	X
Mustard		A	C		B	X	A	A	B	X	A	A	A	A	
Naphtha (Petroleum Spirits) (Thinner) Petroleum fractions	C	X	A	X	A	A	A	C	A	B	A	A	X	A	A
Naphtha Coal Tar (Benzol) Hydrocarbons	X	X	X	X		A	A	A	A	B	A	A			
Naphthalene (Tar Camphor) $\text{C}_{10}\text{H}_8$	C	X	X	X	C	A	A	C	B	A	A	A	A	A	A
Naphthoic Acid $\text{C}_{11}\text{H}_8\text{O}_2$			B	X		A	A		B	B	A	B			
Neatsfoot Oil			A	C		A	A	B			A				
Neohexane (2,2-dimethylbutane) $\text{C}_6\text{H}_{14}$			A			A	A								
Neosol	X	A	A	B		C	A		B	B	A	A			
Neville Acid		C	C	C		B	A	A							

RATING KEY: (A) Excellent (B) Good (C) Fair to Poor (X) Not Recommended  No Data Available.



CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Nickel Acetate Ni(CH <sub>3</sub> CO <sub>2</sub> ) <sub>2</sub>		B	B	A		X	A	A	10%B		A		A		A
Nickel Chloride NiCl <sub>2</sub>	A	A	A	A	X	A	A	A	X	X	B	80%A <sup>200°</sup>	A	B	A
Nickel Nitrate Ni(NO <sub>3</sub> ) <sub>2</sub> • 6H <sub>2</sub> O		A	A	A		A	A		X		A	B	A		A
Nickel Sulfate NiSO <sub>4</sub>	A	A	A	A		A	A	A	X	X	40%A	B	A	A	A
Nitrana (Ammonia Fertilizer)		B	B			C	A				A				
Nitric Acid — 10% HNO <sub>3</sub>	C	B	X	B	C	A	A	A	A	X	A	A	A		A
Nitric Acid — 25% HNO <sub>3</sub>	C	C	X	B	X	A	A	20%B	X	X	30%A	30%A	A		A
Nitric Acid — 35% HNO <sub>3</sub>	C	X	X	C	X	A	A		X	X	50%A	50%A	B		A
Nitric Acid —50% HNO <sub>3</sub>	C	X	X	X	X	A	A	C	X	X	A	X	C		A
Nitric Acid — 70% HNO <sub>3</sub>	X	X	X	X	X	A	A			X	A	X			A
Nitric Acid (Conc.) HNO <sub>3</sub>	X	X	X	X	X	B	A	C	A	X	A	40%A	X		A <sup>120°</sup>
Nitric Acid (Red Fuming)	X	X	X	X	X	B	A	X	A	X	A	B	X		C
Nitrobenzene C <sub>6</sub> H <sub>5</sub> NO <sub>2</sub>	X	X	X	X	X	B	A	B	A	A	A	55%B <sup>212°</sup>	B	B	A <sup>70°</sup>
Nitroethane C <sub>2</sub> H <sub>5</sub> NO <sub>2</sub>		C	X	C		X	A	A	A	A	A	A	C		A <sup>70°</sup>
Nitrogen Tetroxide N <sub>2</sub> O <sub>4</sub>		X	X	X	50%B	C	A		A	B	A	A	X		C
Nitromethane CH <sub>3</sub> NO <sub>2</sub>		C	X	C	X	X	A	A	A	A	A	A	C	A <sup>120°</sup>	B
1-Nitropropane CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> NO <sub>2</sub>		C	X	A		X	A		A	A	A	A			
Octadecane CH <sub>3</sub> (CH <sub>2</sub> ) <sub>16</sub> CH <sub>3</sub>	A	B	A	X		A	A	B							
n-Octane C <sub>8</sub> H <sub>18</sub>			A	X		A	A	B					X		A
Octyl Acetate CH <sub>3</sub> COO • (CH <sub>2</sub> ) <sub>7</sub> CH <sub>3</sub>			X			X	A		A		A				
Oleic Acid (Red Oil) C <sub>18</sub> H <sub>34</sub> O <sub>2</sub>	X	X	C	C	A	B	A		A	C	B	A	B	B	A
Octachlorotoluene C <sub>7</sub> Cl <sub>8</sub>		X	X			A	A		X				X		
Oleum (Fuming Sulfuric Acid) H <sub>2</sub> SO <sub>4</sub> /SO <sub>3</sub>		X	C		20-25%	X	A	A	X	X	X	A	X		X
Olein (Trioleine) C <sub>57</sub> H <sub>104</sub> O <sub>6</sub>		C	B				A								
o-Dichlorobenzene C <sub>6</sub> H <sub>4</sub> Cl <sub>2</sub>		X	X			A	A	X	X	A	A		X		
Olive Oil Mixed glycerides of acids	A	C	A	C		A	A	B	A	A	A	A	A	A	A

Rating specific to % of concentration. Temperature shown is °F. Where not shown, temperature is 70°F (21°C) Ambient.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Oxalic Acid (COOH) <sub>2</sub>		B	C	A	X	C	A	A	B	X	90%B	B	A	X	A <sup>120°</sup>
Ozone O <sub>3</sub>	A	B	X	A	C	A	A	A	10%A	0%A	A	A	X	C	A
Paints & Solvents		X	X				A		X		A	A			
Paint Thinner, DUCO Hydrocarbons	X	C	A	X		B	A	C	X		A	A	X		
Palm Oil Mixture of terpenes		C	A			A	A	B		A	A	A			
Palmitic Acid CH <sub>3</sub> (CH <sub>2</sub> ) <sub>14</sub> COOH	A	C	B	B	A	B	A	B	B	B	A		A		A
Paraffins (Paraffin Oil) Hydrocarbons			A				A	A	A		A	A	A	A	
Paraformaldehyde (CH <sub>2</sub> O) <sub>n</sub>		B	B			C	A		10%A	A	A	A			
Paraldehyde C <sub>6</sub> H <sub>12</sub> O <sub>3</sub>		B	C	A		X	A		A	A	A	A			
Peanut Oil Glycerides of fatty acids	C	B	A	X		A	A	B		A	A	A	A <sup>70°</sup>		A
Pentachloroethane (Pentalin) Cl <sub>2</sub> • CHCl <sub>3</sub>		X	X			A	A		X	A	A	A			
Pentachlorophenol (PCP) C <sub>6</sub> Cl <sub>5</sub> OH		X	X	X		A	A		A	A	A	A			
Pentane (Amyl Hydride) C <sub>5</sub> H <sub>12</sub>		B	A	X	B	A	A	A	A	B	B				
Peppermint Oil		X	X			A	A	C			A				
Perchloric Acid HClO <sub>4</sub>		B	X	B	X	A	70%A	C	X	X	B			C	A
Perchloroethylene (Tetrachloroethylene) C <sub>2</sub> Cl <sub>4</sub>	X	X	X	X	X	A	A	X	X	B	90%A	B	X	A	A
Petroleum (Crude Oil) (Sour) Hydrocarbons	C	C	B	X	C	A	A		B	B	A	A	X	A	A
Phenethyl Alcohol (Benzyl Carbinol) C <sub>6</sub> H <sub>5</sub> (CH <sub>2</sub> ) <sub>2</sub> OH	X	X	X	B		X	A		A	A	A	A			
Phenol (Carbolic Acid) C <sub>6</sub> H <sub>5</sub> OH	X	C	X	C	X	A	A	A	B	A	B	A	C	X	A <sup>100°</sup>
Phenyl Sulfonic Acid C <sub>6</sub> H <sub>4</sub> (OH)SO <sub>3</sub> H			X			X	A		B	B	B				
Phenyl Acetate CH <sub>3</sub> COOC <sub>6</sub> H <sub>5</sub>	X	X	X	B		X	A								
Phenylbenzene C <sub>6</sub> H <sub>5</sub>		X	X			A	A	C							
Phenyl Ethyl Ether (Phenetole) C <sub>6</sub> H <sub>5</sub> OC <sub>2</sub> H <sub>5</sub>		X	X	X		C	A	C							
Phenyl Hydrazine C <sub>6</sub> H <sub>5</sub> NHNH <sub>2</sub>		X	X	X		A	A	B	A	X			X		A <sup>120°</sup>

RATING KEY: (A) Excellent (B) Good (C) Fair to Poor (X) Not Recommended  No Data Available.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Phorone (Diisopropylidene Acetone) C <sub>9</sub> H <sub>14</sub> O		X	X	C		A	A	B							
Phosphoric Acid — 10% H <sub>3</sub> PO <sub>4</sub>	A	B	A	A		A	A	A	X	X	A		A <sup>120°</sup>		A
Phosphoric Acid — 20% H <sub>3</sub> PO <sub>4</sub>	A	B	C	A		A	A	A	X	X	A <sup>212°</sup>	A	A <sup>120°</sup>		A
Phosphoric Acid — 50% H <sub>3</sub> PO <sub>4</sub>	A	B	X	B		A	A	<sup>45%</sup> B	X	X	A	C	A <sup>120°</sup>		A
Phosphoric Acid (Conc.) H <sub>3</sub> PO <sub>4</sub>	C	B	X	B	X	A	A		X	X	A <sup>212°</sup>		A <sup>120°</sup>		A
Phosphorus Oxychloride POCl <sub>3</sub>		X							B	B	B	B			
Phosphorus Trichloride PCl <sub>3</sub>		X	X	A		A	A	B	C	B	A	A	X		A
Photographic Developer		A	A		X	A		A	C	X	A	A	A	C	A
Pickling Solution (NO <sub>2</sub> ) <sub>2</sub> • C <sub>6</sub> H <sub>2</sub> OH	C	X		X		B	A	A				A			
(NO <sub>2</sub> ) <sub>2</sub> • C <sub>6</sub> H <sub>2</sub> OH	B	B	B	B	X	A	A	B	A	C	A	B	B		A
Pine Oil (Yarmor) Cyclic terpene alcohols		X	B	X		A	A	C	A	B	A				
Pinene C <sub>10</sub> H <sub>16</sub>	C	X	B	X		A	A	C							
Piperidine C <sub>5</sub> H <sub>11</sub> N		X	X	X		X	A	B							
Plating Solution — Cadmium			B	B					A			A		X	
Plating Solution — Chrome	X	X	X	C		A	A	A					A <sup>131°</sup>	X	
Plating Solution — Lead		B	B				A	A						A	
Plating Solution — Others		C	A	A		B	A	A			A				
Polyvinyl Acetate Emulsion PVAc + H <sub>2</sub> O		C		A			A	A		B					A
Potassium Acetate CH <sub>3</sub> CO <sub>2</sub> K		B	B	A		X	A	A	<sup>10%</sup> B	A	B	B	A		A
Potassium Bicarbonate KHCO <sub>3</sub>		A	A			A	A	A	B	<sup>50%</sup> B	<sup>30%</sup> A	<sup>50%</sup> B	A		A
Potassium Bisulfate KHSO <sub>4</sub>		A	A			A	A		<sup>10%</sup> A	X	<sup>10%</sup> A		A		A
Potassium Bisulfite KHSO <sub>3</sub>		A	A			A	A		<sup>10%</sup> B		<sup>10%</sup> B	<sup>90%</sup> B			
Potassium Bromide KBr		A	A	A		A	A	A	A	<sup>80%</sup> B <sup>212°</sup>	<sup>90%</sup> B <sup>212°</sup>	<sup>70%</sup> A <sup>167°</sup>	A		A
Potassium Carbonate (Potash) K <sub>2</sub> CO <sub>3</sub>	C	A	A	A		A	A	A	X	B	B	<sup>90%</sup> A	A	B	A
Potassium Chlorate KClO <sub>3</sub>		A	A	A		A	A	A	X	B	<sup>60%</sup> A	<sup>20%</sup> A	A	B	A
Potassium Chloride KCl	A	A	A	A		A	A	A	X	B	A	<sup>30%</sup> A <sup>167°</sup>	A	B	A
Potassium Chromate K <sub>2</sub> CrO <sub>4</sub>		A	A			<sup>50%</sup> A	A	A	A	A	A		A		A

Rating specific to % of concentration. Temperature shown is °F. Where not shown, temperature is 70°F (21°C) Ambient.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS			
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(V) FKM FLUOROCARBON	PTFE, PFA	(TPE XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF	
Potassium Copper Cyanide $K_3[Cu(CN)_4]$	A	A	A	A		A	A					A		A		
Potassium Cyanide KCN	A	A	A	A		A	A	A	C	B	90%B <sup>212°</sup>	30%B	A	C	A	
Potassium Dichromate $K_2Cr_2O_7$	A	A	A	A		A	A	A	A	A	A	25%B	A	C	A	
Potassium Hydroxide (Caustic Potash) (Lye) KOH	B	B	B	A	C	B	A	A	X	B	A	50%B	A	C	A <sup>150°</sup>	
Potassium Iodide KI		A	A	A		A	A		10%B		B	B	A		A	
Potassium Nitrate (Saltpeper) $KNO_3$	A	A	A	A		A	A	A	80%A	B	80%B <sup>212°</sup>	80%B <sup>212°</sup>	A	B	A	
Potassium Nitrite $KNO_2$	A	A	A	A	B	A	A		B	B	B	B				
Potassium Permanganate (Purple Salt) $KMnO_4$			C	C	A	X	B	A	A	10%A	B	30%B <sup>212°</sup>	A	B	A	A
Potassium Phosphate $KH_2PO_4$		A	A	A		A	A		X	X	30%B	10%B				
Potassium Silicate $K_2Si_2O_5$		A	A	A		A	A		B	B	B	B				
Potassium Sulfate $K_2SO_4$	A	A	A	A	B	A	A	A	B	B	A	A	A	B	A	
Potassium Sulfide $K_2S$	A	A	A	A		A	A		X	B	B	10%B	A		A	
Potassium Sulfite $K_2SO_3 \cdot 2H_2O$		A	A	A		A	A		A	X	50%B		A		A	
Propane (LPG) $C_3H_8$	B	B	A	X	B	A	A	C	A	A	A	A	X	A	A	
Propionaldehyde (Propanal) $C_2H_5CHO$			X			X	A		A	A	A	A				
Propionic Acid (Methylacetic Acid) $CH_3CH_2CO_2H$		X	X	A		A	A		A	X	B	90%A				
n-Propyl Acetate $CH_3COO \cdot (CH_2)_2CH_3$		X	X	A		X	A	B	A		A	A	C		A	
Propyl Alcohol (1-Propanol) $CH_3CH_2CH_2OH$	X	B	B	A		A	A		A	A	A	A	A	A	A	
n-Propyl Nitrate (NPN) $CH_3(CH_2)_2NO_3$			A	B		C	A	B	A	X						
Propylene $C_3H_6$		X	X	X		A	A	B	A	A	A	A				
Propylene Dichloride $CH_3CH(Cl)CH_2Cl$		X	X	X		B	A		X	A	A	B				
Propylene Glycol (Methyl Glycol) $C_3H_6(OH)_2$		C	A	A		A	A	A	A	A	A	A	A	A	A	
Propylene Oxide $C_3H_6O$		X		C		X	A	A	B	B	A		X		X	
Pydraul (Phosphate Eser Base Fluid)	X	X	X	B	A	A	A	A		A	A	A				

RATING KEY: (A) Excellent (B) Good (C) Fair to Poor (X) Not Recommended  No Data Available.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Pyranol		X	A			A	A								
Pyridine N(CH <sub>4</sub> ) <sub>4</sub> CH	X	X	X	C	X	X	A	A	A	B	A	50%A <sup>100°</sup>	C	A	X
Pyroigneous Acid (Wood Vinegar)		C	C	C		A	A		B	X	10%A		A	X	A
Pyrrole (Azole) C <sub>4</sub> H <sub>5</sub> N		X	X	X		C	A	C							
Quaternary Ammonium Salts NH <sub>4</sub> (X)		A	A			A	A			X	A				
Quench Oil		B	B			A	A		A		A	A			
Rape-Seed Oil (Colza Oil)	C	C	B	A		A	A	B		A	A	A			
Rose Oil Geraniol, citronellol		C				A	A	A			A				
Rosin C <sub>20</sub> H <sub>30</sub> O <sub>2</sub>		C	A				A	A	A		A	A	A	B	
Rosin Oil (Rosinol)		A	A			A	A								
Rotenone C <sub>23</sub> H <sub>22</sub> O <sub>6</sub>		A	A	A		A	A								
Rubber Latex Emulsions (C <sub>5</sub> H <sub>8</sub> ) <sub>n</sub> /H <sub>2</sub> O						A	A		A		A	A			
Rubber Solvents (Petroleum Distillate) Hydrocarbons		C	X			X	A		A		A	A			
Rum Alcoholic liquor from molasses	X	A	A	A		B	A	A			A	A			
Rust Inhibitors		C	A			A		B			A		A		
Salad Dressing Fats, oils, water			A			A		A	B	X	A		A		
Sal Ammoniac (Ammonium Chloride) NH <sub>4</sub> Cl	A	A	A	A	A	A	A	A	X	X	B	A	A	X	A
Sal Soda (Sodium Carbonate) NaCO <sub>3</sub>		A	A	A		A	A		X	A	A	A			
Salicylic Acid HOC <sub>6</sub> • H <sub>2</sub> COOH		B	B	A		B	A		A	X	B	A	A		A
Salt Water (Brine) NaCl/H <sub>2</sub> O	A	B	A	A	A	A	A	A	B	X	A	A	A		A
Sea Water (Brine)	A	B	A	A	X	A	A	A	A	C	A	A	A	A	A
Sesame Seed Oil Olein, stearin, palmitin		C	A			A	A	B		A	A				
Sewage	X	B	A	C	B	A	A	A	B	B	A	A	A		A
Silicate Esters Si(OR) <sub>4</sub>	A	A	B	X	C	A	A	B							
Silicone Oils (Versilube Etc.) (CH <sub>3</sub> ) <sub>2</sub> SiO <sub>2</sub> <sub>n</sub>	A	C	A	A	A	A	A	C	B	B	A	A	A		A
Silver Cyanide AgCN		A					A		X	A	A	A	A		A

Rating specific to % of concentration. Temperature shown is °F. Where not shown, temperature is 70°F (21°C) Ambient.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Silver Nitrate AgNO <sub>3</sub>	A	A	B	A		A	A	A	X	X	60%A	60%A	A	A	A
Skydrol Hydraulic Fluid® (Phosphate Ester Base)		X	X	A	A	C	A	B			A	A			
Soap Solutions Salt of fatty acid in H <sub>2</sub> O	A	B	A	A	A	A	A	A	C	X	A	A	A	A	A
Soda Ash (Sodium Carbonate) Na <sub>2</sub> CO <sub>3</sub>		A	A	A	B	A	A	A	X	A	A	A			
Sodium Acetate CH <sub>3</sub> COONa	X	C	C	A		X	A	A	A	A	A	A	A	A	
Sodium Aluminate Na <sub>2</sub> Al <sub>2</sub> O <sub>4</sub>		A	A			A	A	A		50%A	50%A	10%B	A		A
Sodium Bicarbonate (Baking Soda) NaHCO <sub>3</sub>		A	A	A	B	A	A	A	B	C	20%A	20%A	A	X	A
Sodium Bisulfite (Niter Cake) NaHSO <sub>4</sub>		A	A	A	B	A	A	A	50%B	C	50%B	B	A	C	A
Sodium Bisulfite (Cream of Tartar) NaHSO <sub>3</sub>		A	C	A	B	A	A	A	B	20%B	50%A	B	A	X	A
Sodium Borate Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub>		A	A	A	B	A	A	A	B		A	A	A <sup>140°</sup>	C	A
Sodium Bromide NaBr							A		C	C	30%B	50%B	A		A
Sodium Chlorate NaClO <sub>3</sub>		B	A	A		A	A	A	70%B <sup>212°</sup>	B	B	70%B <sup>212°</sup>	A	B	A
Sodium Chloride (Table Salt) NaCl	A	A	A	A	A	A	A	A	B	30%B	A	A	A	A	A
Sodium Chromate Na <sub>2</sub> CrO <sub>4</sub>		A	A		A	A	A	80%A <sup>212°</sup>	60%A	60%A	60%A	A		A	A
Sodium Cyanide NaCN		A	A	A	A	A	A	A	X	A	A		A	C	A
Sodium Dichromate (Sodium Bichromate) Na <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> • 2H <sub>2</sub> O	A	B		A	20%X	A	A						A		A
Sodium Fluoride NaF		A	A	A		A	A		30%B		10%B	10%B	A		A
Sodium Hexametaphosphate (Calgon) (NaPO <sub>3</sub> ) <sub>6</sub>	B	B	B	B		A	A		C	B	B	A			
Sodium Hydroxide (Caustic Soda) (Lye) NaOH	C	B	B	A	X	X	A	50%A	X	50%B	50%A	70%B <sup>212°</sup>	A	X	A
Sodium Hypochlorite NaClO	X	B	X	C	5%A	B	A	20%A	X	X	X	10%B	X	X	A
Sodium Metaphosphate (Kurrol's Salt) Na(PO <sub>3</sub> ) <sub>3</sub> H	B	C	B	A		A	A	A	X		B	A	X	B	
Sodium Metasilicate Na <sub>2</sub> SiO <sub>3</sub>		A	A			A		A	B		A	A	A	B	A
Sodium Nitrate (Chile Saltpeter) NaNO <sub>3</sub>		B	C	A	B	A	A	A	90%A	90%A	90%A	30%A	A	A	A

RATING KEY: (A) Excellent (B) Good (C) Fair to Poor (X) Not Recommended  No Data Available.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Sodium Nitrite NaNO <sub>2</sub>		X	A			A	A		A	A	A	A			A
Sodium Perborate NaBO <sub>3</sub>		B	C	A	B	A	A	A	X	10%B	A	10%B	A	B	A
Sodium Peroxide (Sodium Dioxide) Na <sub>2</sub> O <sub>2</sub>	X	B	B	B	B	A	A	B	10%B	90%A	0%B	10%B	B	X	A
Sodium Phosphate (Tribasic) (TSP) Na <sub>3</sub> PO <sub>4</sub>	A	B	B	A	B	A	A	A	X	B <sup>167°</sup>	B	A	A		A
Sodium Silicates (Water Glass) Na <sub>2</sub> O • SiO <sub>2</sub>		A	A	A	A	A	A	A	A	A	A	B	A		A
Sodium Sulfate (Salt Cake) (Thenardite) Na <sub>2</sub> SO <sub>4</sub>	A	B	A	A	A	A	A	A	30%B	B	A	A	A		A
Sodium Sulfide (Pentahydrate) Na <sub>2</sub> S • 5H <sub>2</sub> O	A	A	A	A	A	A	A	A	30%A <sup>212°</sup>	B	30%A <sup>167°</sup>	50%B <sup>212°</sup>	A	A	A
Sodium Sulfite Na <sub>2</sub> SO <sub>3</sub>	A	A	A	A	A	A	A		30%A	X	30%A	30%B <sup>212°</sup>	A	A	A
Sodium Tetraborate Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub> • 10H <sub>2</sub> O				A		B			A			A		C	
Sodium Thiosulfate (Antichlor) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	A	A	A	A		A	A		A	C	A <sup>122°</sup>	B <sup>122°</sup>	A	B	A
Sorgum			A	A					A		A	A	A		
Soybean Oil Triglycerides of acids		C	A	A	C	A	A	A	B	A	A	A	A	B	B
Soy Sauce Fermented soya bean/wheat			A	A					A		X	A			
Sperm Oil (Whale Oil) Fatty acid esters		X	A			A	A	B		A	A	A			
Stannic Chloride (Tin Chloride) SnCl <sub>4</sub>	B	B	A	B	B	A	A	A	X	C	10%A	B	A		A
Stannous Chloride (Tin Chloride) SnCl <sub>2</sub>	B	A	A	B	15%B	A	A		X	B	10%A	A	A		A
Starch C <sub>6</sub> H <sub>10</sub> O <sub>5</sub>		A	A	B	B	C	A	A	A	C	A	A	A	B	
Stearic Acid CH <sub>3</sub> (CH <sub>2</sub> ) <sub>16</sub> CO <sub>2</sub> H	A	158°B	B	B	B	A	A	B	C	C	A	B	A	C	A
Stoddard Solvent Petroleum distillate	A	C	A	X	A		A	C	A	A	A	X	A	A	X
Styrene (Vinylbenzene) C <sub>6</sub> H <sub>5</sub> CHCH <sub>2</sub>	C	X	X	X	X	A	A	C	A	A	A	A			A
Sucrose Solution (Sugar) C <sub>12</sub> H <sub>22</sub> O <sub>11</sub> /H <sub>2</sub> O	X	A	A	A	A	A	A	A	A	A	A	A			
Sulfamic Acid H <sub>2</sub> NSO <sub>3</sub> H		A	B		A		A		10%A	X	X		X		X
Sulfite Liquors			B	A	C	B			A				A		
Sulfur	S	B	B	X	A	A	A		A	A	A	A	B	A	A
Sulfur Chloride S <sub>2</sub> Cl <sub>2</sub>		X	C	X	C	A	A	X	B	X	B	A	X		A

Rating specific to % of concentration. Temperature shown is °F. Where not shown, temperature is 70°F (21°C) Ambient.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Sulfur Dioxide SO <sub>2</sub>	B	A	X	B	X	A	A	A	A	B	10%A	80%A	A	B	A
Sulfur Hexafluoride SF <sub>6</sub>		A	B	A	A	A	A	B							
Sulfur Trioxide SO <sub>3</sub>	B	C	C	C	X	A	A	C	B	B	B	B	X		X
Sulfuric Acid 10% H <sub>2</sub> SO <sub>4</sub>	B	A	B	A	A	A	A	A	X	X	A	A	A		A
Sulfuric Acid 25% H <sub>2</sub> SO <sub>4</sub>	X	B	C	B	A	A	A	A	X	X	B	A	A		A <sup>150°</sup>
Sulfuric Acid 50% H <sub>2</sub> SO <sub>4</sub>	X	B	C	B	A	A	A	A	X	X	X	A	A		A <sup>150°</sup>
Sulfuric Acid 60% H <sub>2</sub> SO <sub>4</sub>	X	C	X	B	X	A	A	A	X	X	X	A	A		A <sup>150°</sup>
Sulfuric Acid 75% H <sub>2</sub> SO <sub>4</sub>	X	X	X	C	X	A	A	A	X	C	C	A	A		A <sup>150°</sup>
Sulfuric Acid 95% H <sub>2</sub> SO <sub>4</sub>	X	X	X	C	X	A	A	A	X	B	A	A	X		A <sup>120°</sup>
Sulfuric Acid (Conc.) H <sub>2</sub> SO <sub>4</sub>	X	X	X	C		A	A	98%B	X	B	B	A	X		A <sup>120°</sup>
Sulfuric Acid (Fuming) H <sub>2</sub> SO <sub>4</sub>	X	X	X	X	20%X	B	A		C	X	B	B			
Sulfurous Acid H <sub>2</sub> SO <sub>3</sub>	X	X	B	C	C	A	A	A	B	X	B	B	A	X	A
Tall Oil (Liquid Rosin) Rosin acids		B	A	X		A	A	A	X	B <sup>212°</sup>	B	A	A		A
Tallow Fat from cattle, sheep			A			A	A	B	A		A		B	C	
Tannic Acid C <sub>76</sub> H <sub>52</sub> O <sub>46</sub>	A	B	C	C	10%A	A	A	A	A	A	A	10%B	A	X	A
Tanning Liquors Tannic acid		B	A				A	A	A		A	A	A	X	
Tar, Bituminous(Coal Tar) (Pitch) Mixture of aromatic & phenolic hydrocarbons		C	B	X	X	A	A	B	A		A	A	A	A	
Tartaric Acid C <sub>4</sub> H <sub>6</sub> O <sub>6</sub>	A	A	B	B	B	A	A	A	20%A	X	A	90%A	A	X	A
Terpenes C <sub>10</sub> hydrocarbons	C	X	C	X		A	A		A	X					
Terpineol (Terpilenol) C <sub>10</sub> H <sub>18</sub> O	X	X	C	C		A	A	B	A	A	A	A	X		B <sup>120°</sup>
Tertiary Butyl Alcohol (CH <sub>3</sub> ) <sub>3</sub> COH		A	A			B	A	B					B		
Tertiary Butyl Catechol C <sub>9</sub> H <sub>14</sub> O <sub>2</sub>		B	X			A	A	B	C	B	B				
Tertiary Butyl Mercaptan C <sub>4</sub> H <sub>10</sub> S		X	X			A	A	B							
Tetra Bromomethane CBr <sub>4</sub>		X	X			A	A	X	X				X		
Tetrabutyl Titanate Ti(C <sub>4</sub> H <sub>9</sub> ) <sub>4</sub>		A	B	B		A	A	B							

RATING KEY: (A) Excellent (B) Good (C) Fair to Poor (X) Not Recommended  No Data Available.



CHEMICAL Formula	ELASTOMERS							METAL PARTS				PLASTICS			
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE-XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Tetrachloroethylene $Cl_2C = CCl_2$							X						A		
Tetrachlorodifluoroethane $(Cl_2FC)_2$		X	X				A								
Tetrachloroethane (Acetylene Tetrachloride) $(Cl_2HC)_2$		X	X	X		A	A	X	X	A	C	90%A <sup>212°</sup>	X	A	A
Tetraethyl Lead $Pb(C_2H_5)_4$		X	B	X		B	A	C	B	A	A		A		A
Tetraethylene Glycol (TEG) $HOCH_2(CH_2OCH_2)_3CH_2OH$			A			A	A								
Tetrahydrofuran (THF) $C_4H_8O$	C	X	X	C	C	X	A	B					C <sup>100°</sup>	A	B <sup>70°</sup>
Tetrahydronaphthalene (Tetralin) $C_{10}H_{12}$		X	X	X		A	A		A	A	A	A	C		
Thionyl Chloride $SOCl_2$		X	X	X		B	A	B	C	A	A	10%A	B	B	X
Thiophene $C_4H_4S$		X	X	X		C	A								
Titanium Tetrachloride $TiCl_4$		X	C	X		A	A	X	X	A	B	B	B		B
Toluene (Toluol) $C_7H_8$	X	X	C	X	C	B	A	C	A	A	A	A	X	B	A
Toluene Diisocyanate $CH_3C_6H_4(NCO)_2$		X		A	B		A	B							
Toluidine $CH_3C_6H_4 \cdot H_4NH_2$			X			B	A		A	A	A	A			
Tomato Pulp & Juice			A				A	A	B		A	A	A		A
Toothpaste		C	A			A	A			X	A	A			
Transformer Oil (Petroleum) Hydrocarbons	X	C	B	X		A	A	X	A	A	A	A	B	C	
Transmission Fluid (Type A)	A	C	A	X	B	A	A	C	A	A	A	A			
Triacetin $C_9H_{18}O_6$	X	B	A	A		X	A	A	B						
Triallyl Phosphate $P(OC_3H_7)_3$	C	C	X	A		A	A						B		A
Triaryl Phosphate $(C_6H_5O)_3PO$		C	X			A	A								
Tributoxyethyl Phosphate $(C_4H_9O)_3P(C_2H_5)$	X	X	X	A		B	A	B							
Tributyl Phosphate (TBP) $(C_4H_9)_3PO_4$	X	X	X	C	C	X	A	B	A	A	A		B <sup>100°</sup>		A <sup>100°</sup>
Dibutyl Mercaptan $(C_4H_9)_2S$		X	X			A	A	B							
Trichloroacetic Acid (TCA) $CCl_3COOH$		B	C	C	X	B	A	B	X	X	X	B	B		B
Trichlorobenzenes $C_6H_3Cl_3$		X	X			B	A		X	A	A	B			
Trichloroethane $C_2H_3Cl_3$	X	X	X	X		B	A	X	X	A	A	A	X		A

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CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	SANTOPRENE® (IPE XL)	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Trichloroethylene (Ex-Tri) (Hi-Tri)® C <sub>2</sub> HCl <sub>3</sub>	X	X	X	X	X	C	A	X	X	B	90%A <sup>167°</sup>	A	X	B	A
Trichloropropane CH <sub>2</sub> ClCHClCH <sub>2</sub> Cl		A	X			B	A	X	X	A	A	A	X		
Tricresyl Phosphate (Lindol) (TCP)® (C <sub>6</sub> H <sub>4</sub> O) <sub>3</sub> • PO	X	C	X	A	C	C	A	B		A	B	A	B		X
Tricresyl Alcohol (Tridecanol) C <sub>12</sub> H <sub>25</sub> • CH <sub>2</sub> OH			A			B	A								
Triethanol Amine (TEA) N(C <sub>2</sub> H <sub>4</sub> OH) <sub>3</sub>	X	A	X	B	X	C	A	A	A	A	A	A	A	B	X
Triethyl Aluminum (ATE) Al(C <sub>2</sub> H <sub>5</sub> ) <sub>3</sub>		X	X			B	A	B							
Triethyl Amine (CH <sub>3</sub> CH <sub>2</sub> ) <sub>3</sub> N		B	A				A			A	A	A	C		A <sup>120°</sup>
Triethyl Borane (C <sub>2</sub> H <sub>5</sub> ) <sub>3</sub> B		X	X			A	A	B							
Triethylene Glycol (TEG) (CH <sub>2</sub> OCH <sub>2</sub> CH <sub>2</sub> OH) <sub>2</sub>			A			A	A						A		
Trimethylene Glycol HO(CH <sub>2</sub> ) <sub>3</sub> OH			A	A		A	A		A	A	A	A			
Trinitrotoluene (TNT) CH <sub>3</sub> C <sub>6</sub> H <sub>2</sub> (NO <sub>2</sub> ) <sub>3</sub>		B	X	X		C	A	A							
Trioctyl Phosphate (C <sub>8</sub> H <sub>17</sub> O) <sub>3</sub> PO		X	X	A		B	A	B							
Tung Oil (Wood Oil) Fatty acids	C	C	A	X	B	A	A	B	A		A	A	A		
Turpentine C <sub>10</sub> H <sub>16</sub>	X	X	A	X	B	A	A	C	A	A	A	A	X	A	A
Unsymmetrical Dimethyl Hydrazine (UDMN) H <sub>2</sub> NN(CH <sub>3</sub> ) <sub>2</sub>		C	C	A		X	A	B							A
Urea (Carbamide) CO(NH <sub>2</sub> ) <sub>2</sub>		B	B		B	A	A		B		50%B		A	A	A
Urine		X	A			A	A	A	A	A	A	A	A	C	A
Valeric Acid CH <sub>3</sub> (CH <sub>2</sub> ) <sub>3</sub> COOH		X	X	A			A		A						
Vanilla Extract (Vanillin) C <sub>6</sub> H <sub>3</sub> (CHO) • (OCH <sub>3</sub> )(OH)		X	A			X	A				A				
Varnish Oil, gum resins, oil of turpentine		C	B	X		A	A		A		A	A	A		A
Vegetable Juices		C	A				A	A	C		A				
Vegetable Oils	A	C	B	A		A	A	B	A	B	A	A	X		
Vinegar Dilute acetic acid	X	B	C	A	C	A	A	A	C	X	A	A	A	C	A
Vinyl Acetate CH <sub>3</sub> COOC, HCH <sub>2</sub>		B	X			X	A		B	A	A	A	B		A
Vinyl Chloride (Chloroethylene) CH <sub>2</sub> CHCl		X	X	C		A	A	X	X	A	A	A	X		B

RATING KEY: (A) Excellent (B) Good (C) Fair to Poor (X) Not Recommended  No Data Available.

CHEMICAL Formula	ELASTOMERS								METAL PARTS				PLASTICS		
	POLYURETHANE	NEOPRENE	BUNA-N	E.P.D.M.	HYTREL®	(VT) FKM FLUOROCARBON	PTFE, PFA	(TPE XL) SANTOPRENE®	ALUMINUM	CAST IRON/STEEL	STAINLESS STEEL	HASTELLOY	POLYPROPYLENE	ACETAL	PVDF
Walnut Oil		B	A			A	A								
Water, Distilled (Also Deionized) H <sub>2</sub> O	A	C	A	A		A	A	A	A	C	A	A	A	A	A
Water, Fresh H <sub>2</sub> O	A	B	A	A	A <sup>72°</sup>	A	A	A	A	A	A	A	A	A	A
Waxes Hydrocarbons		A	A	X			A		A		A	A		A	
Weed Killers		C	B			A		B	X		A				
Whiskey Ethanol, esters, acids	A	A	B	A	B	A	A	A	A	X	A	A	A	B	A
White Oil (Mineral) (Petroleum) Mixture of liquid hydrocarbons		C	A	X		A	A	C			A	A			
White Sulfate Liquor		A	B	A		B	A		B	C	A	B	A		A
Wines	X	A	A	A	A	B	A	A	C	X	A	A	A	B	A
Wort, Distillery Sugar solution from malt		A				A	A		A	B	A	A			
Xylene (Xylol) C <sub>6</sub> H <sub>4</sub> (CH <sub>3</sub> ) <sub>2</sub>	X	X	X	X	C	A	A	C	A	B	B	A	X	A	A
Xylidines (Xylidin) (CH <sub>3</sub> ) <sub>2</sub> C <sub>6</sub> H <sub>3</sub> NH <sub>2</sub>		X		X		X	A	C	B	B					
Zeolite Hydrated alkali aluminum silicates		C	C	A		A	A	A			A	A			
Zinc Acetate Zn(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>2</sub>		B	C	A		X	A	A	C				A		A
Zinc Carbonate ZnCO <sub>3</sub>			A			A	A		B	B	B	B			
Zinc Chloride ZnCl <sub>2</sub>	A	B	B	A	A	A	A	A	10%A	B	10%A	A	A	B	A
Zinc Hydrosulfite ZnHSO <sub>3</sub>		A	A			A	A	A	X		A				
Zinc Sulfate ZnSO <sub>4</sub>		A	A	A	X	B	A	A	20%B	X	B	90%B	A	B	A

**RATING KEY:** (A) Excellent (B) Good (C) Fair to Poor (X) Not Recommended  No Data Available.

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