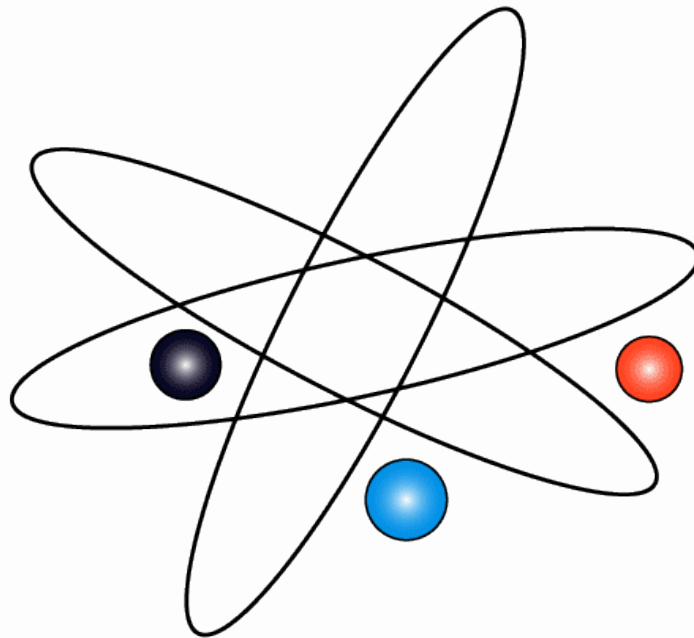


Corrosion Resistance Guide



Chemical/Formula	Elastomers						Metal			Plastic					
	Buna N NBR	Nordel® EPDM	Hyrel® TPE	Neoprene CR	PTFE	Santoprene® TPO	Viton® FPM	Aluminum T395	Cast Iron FC	Stainless Steel 316	Polypropylene PPs	Delrin (Acetal)	Kynar® PVDF	PTFE	Ryton
Rating Key: (A) Excellent; (B) Good; (C) Fair to Poor; data limited to % concentration and/or temperature; (N) Not Recommended; (-) No Data Available Or Not Shown, Where Not Shown, temperature is 70°F ambient.															
Acetaldehyde (Ethanal) CH3CHO	X	A	B	X	A	B	X	A	C	A	C	A	A/150°	A	A
Acetamide (Acetic Acid Amide) CH3COHN2	B	A	-	B	A	B	B	A	B	X	-	A/140°	A	A	
Acetate Solvents CH3COOR	X	A	-	X	A	B	X	A	X	X	A	A	A	A	
Acetic Acid - 20%	C	A	X	B	A	A	C	B	X	X	A	A	A	-	
Acetic Acid - 30%	C	A	X	B	A	A	C	X	X	X	A	B	B	-	
Acetic Acid - 50% CH3COOH	C	A	-	C	A	A	C	X	X	X	B	B	A	-	
Acetic Acid - Glacial CH3COOH	C	B	X	X	A	A	X	X	X	X	A	A/120°	A	A	
Acetic Anhydride (CH3CO)2O (Acetic Oxide)	C	B	C	B	A	A	X	B	B/212° 90%	A	A	B/70°	A	A	
Acetone (Dimethylketone) CH3COHO3	X	A	C	X	A	A	X	B	A	B	A	B	A	A	
Acetone Cyanohydrin (CH3)2C(OH)CH	X	X	-	B	A	A	X	A	C	A	-	-	A	-	
Acetonitrile (Methyl Cyanide) CH3CN	C	A	-	A	A	B	X	A	A	B	B/100°	A	A	-	
Acetophenone (Phenyl Methyl Ketone) CH6H5COCH3	X	A	-	X	A	B	X	B	B	A	A/70°	-	A	A	
Acetyl Acetone (2,4-Pentanedione) CH3COCH2COH2	X	A	-	X	A	B	X	B	X	B	-	-	A	-	
Acetyl Chloride CH3COCl	X	C	X	X	A	B	B	X	X	X	X	-	A	A	
Acetylene (Ethyne) HC = CH	A	A	A	C	A	C	A	A	A	A	X	A	A	A	
Acetyl Salicylic Acid (Aspirin) (CH3OCO)CH64COOH	-	B	-	X	A	A	-	A	X	B	-	-	A	-	
Acetylene Tetrabromide (Tetra Bromoethane) (CHBr2)2	X	-	-	X	A	X	A	X	X	A	-	-	A	-	
Acrolein (Acrylaldehyde) H2C=CHCHO	B	-	-	-	A	A	A	A	B	B	-	-	A	-	
Acrylonitrile (Vinyl Cyanide) CH2=CHCN	X	X	-	X	A	A	X	A	B	B	B	A	A	-	
Adipic Acid H00C(CH2)4(1,4-Butanedicarboxylic Acid) COOH	B	-	-	X	A	B	B	B	B	B	A	A	A	-	
ALCOHOLS															
Allyl Alcohol (2-Propen-1-ol) R-OH	A	A	-	A	A	-	A	C	A	A	B	A	A	A	-
Amyl (1-Penatol) C4H9CH2O	A	A	A	A	A	A	A	B	-	A	A	A	A	-	
Benzyl (Phenylcarbinol) C6H5CH2OH	X	B	C	C	A	X	A	A	C	A	A	A	A	-	
Butyl (Butanol) C3H7CH2OH	A	A	B	A	A	B	A	A	C	A	A	A	A	-	
Decyl Alcohol (Decanol)	-	-	-	-	-	-	-	A	A	A	A	B	A	-	
Denatured Alcohol	A	A	-	A	A	-	A	-	-	A	A	A	A	-	

Chemical/Formula	Elastomers						Metal			Plastic					
	Buna N NBR	Nordel® EPDM	Hytel® TPE	Neoprene CR	PTFE	Stamoprene® TPO	Viton® FPM	Aluminum T395	Cast Iron FC	Stainless Steel 316	Polypropylene PPS	Delrin (Acetal)	Kynar® PVDF	PTFE	Ryton
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Diacetone (Tyranon) (CH3)2C(OH)CH2COCH3	X	B	C	X	A	B	X	A	A	A	X	A	A	A	-
Ethyl (Ethanol) CH3CH2OH	A	A	A	A	A	A	-	B	B	A	A	A	A	A	-
Ethyl Butyl Alcohol	A	B	-	B	A	B	B	A	A	A	A/70°	A	A	A	-
Hexyl (1-Hexanol) C5H11CH2OH	A	A	-	B	A	B	A	A	A	A	A	A	A	A	-
Isoamyl Alcohol	B	A	-	A	A	A	A	B	B	A	-	-	A	A	-
Isobutyl (Isobutanol)	B	A	-	B	A	A	B	B	B	A	A	-	A/150°	A	-
Isopropyl (Isopropanol)	A	A	A	B	A	A	A	A	A	A	A	-	A	A	-
Lauryl Alcohol (n-Dodecanol)	A	-	-	-	A	A	B	A	A	A	-	-	-	A	-
Methyl Amyl Alcohol	A	A	-	A	A	B	A	B	B	A	A/120°	-	A	A	-
Methyl (Methanol)	A	A	A	B	A	A	B	A	A	A	A	-	A	A	-
Octyl (Caprylic Alcohol)	B	A	A	B	A	B	A	A	A	A	A	-	A/120°	A	-
Propyl (Propanol) C2H5CH2OH	A	A	-	-	A	-	B	A	A	A	A	-	A	A	-
Tridecyl Alcohol	B	-	-	X	A	-	B	X	X	-	-	-	-	A	-
Allyl Bromide (3-Bromopropene) H2C=CHCH2Br	X	X	-	X	A	-	B	X	X	B	A/70°	-	A	A	-
Allyl Chloride (3-Chloropropene) CH2=CHCH2Cl	X	-	-	X	A	X	A	X	-	B	A/70°	A	-	A	-
Alkazene (Chloethyl or Polyisopropyl benzenes)	X	-	-	X	A	B	-	-	-	-	-	-	-	A	-
Alum (Aluminum Potassium Sulfate (Dodecahydrate) KAl(SO4)2 * 12H2O	A	A	-	A	A	A	X	-	-	B	A	-	A	A	-
Aluminum Acetate (Burrow's Solution)	C	A	-	C	A	A	X	B	C	A	A/100°	A	A	A	-
Aluminum Ammonium Sulfate AlNH4(SO4)2 (Alum)	B	-	-	B	A	A	A	-	-	-	A	-	A	A	-
Aluminum Bromide AlBr3	B	A	-	A	A	-	-	-	-	-	-	-	A	A	-
Aluminum Chloride AlCl3	A	A	B	A	A	A	A	X	C	B	A	B	A	A	-
Aluminum Fluoride AlF3	A	B	-	A	A	A	A	A/50%	C	C	A	X	A	A	-
Aluminum Hydroxide Al(OH)3 (Alumina Trihydrate)	B	A	-	A	A	A	C	B/10%	B/30%	B	A	-	A	A	-
Aluminum Nitrate Al(NO3)3 * 9H2O	A	A	-	A	A	A	A	X	-	A/10%	A	-	A	A	-
Aluminum Phosphate AlPO4	A	A	-	A	A	A	A	-	-	-	-	-	-	A	A
Aluminum Potassium Sulfate (Potash Alum) KAl(SO4)2	A	A	-	A	A	A	A	A/10%	X	A	A	-	A	A	-
Aluminum Sodium Sulfate (Soda Alum) NaAl(SO4)2	A	A	-	A	A	A	A	-	-	A	-	-	-	A	A

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Aluminum Sulfate (Cake Alum) Al2(SO4)3	A	A	B	A	A	A	A	B/30%	X	A 167° 50%	A	B	A	A	-
Amirnes R-NH2	X	A	A/70%	B	A	A	X	A	-	A	B	C	X	A	-
Ammonia Anhydrous, Liquid NH3	B	A	X	B	A	A	X	A	A	A	A	X	A	A	-
Ammonia Gas - Cold	A	-	-	A	A	A	A	-	-	-	-	-	-	A	-
Ammonia Gas - Hot	C	-	-	B	A	A	X	-	-	-	-	-	-	A	A
Ammonia Liquors	-	-	-	A	A	A	X	A	A	A	-	-	-	A	-
Ammonia Cupric Sulfate (NH4)2Cu(SO4)2	A	-	-	-	A	-	A	-	-	-	B	-	-	A	-
Ammonium Acetate CH3CO2NH4	-	-	-	A	A	A	A	A	B/50%	A/50%	-	-	-	A	-
Ammonium Bicarbonate NH4HCO	A	A	-	A	A	B	A	B	B	B/90%	-	-	-	A	-
Ammonium Bifluoride - 10% NH4HF2	B	A	-	X	A	A	A	C	X	B	A	-	-	A	-
Ammonium Carbonate (NH4)2CO3	X	A	-	B	A	A	A	B	B	B 212° 70%	A	-	A	A	A
Ammonium Caserite	-	-	-	A	-	A	-	-	-	B	-	-	-	-	-
Ammonium Chloride NH4Cl (Sal Ammoniac)	A	A	A	A	A	A	A	X	X	A/30%	A	-	A	A	-
Ammonium Dichromate (NH4)2Cr2O7	A	A	A	A	A	A	-	A	A	B	-	X	-	A	-
Ammonium Fluoride NF4F	B	A	-	B	A	-	A/20%	B/10%	B/20%	A/50%	B	-	A	A	-
Ammonium Hydroxide (Aqua Ammonia) NH4OH	B	A	-	B	A	A	B	B/30%	B/30%	B	A	-	A	A	-
Ammonium Metaphosphate	A	A	-	A	A	-	A	B/90%	B	A	A	B	A	A	A
Ammonium Nitrate	A	A	-	A	A	A	A	B	A	-	A	-	A	A	-
Ammonium Nitrite NH4NO2	A	-	-	A	A	A	-	-	-	A	A/70%	A	A	A	A
Ammonium Oxalate (NH4OOC)2	A	-	-	A	-	A	-	-	-	-	B	-	B	A	-
Ammonium Persulfate (NH4)2S2O8	B	A	-	A	A	A	A	C	X	A	A	-	A	A	-
Ammonium Phosphate, (NH4)H2PO4 Monobasic	A	A	B	A	A	A	A	X	X	B	A	A	A	A	-
Ammonium Phosphate, Di Basic (NH4)2HPO4	A	-	-	A	A	A	A	B	-	A	A	B	A	A	A
Ammonium Phosphate, Tri-Basic (NH4)2PO4 * 3H2O	A	-	-	A	A	A	A	X	-	B	A	-	A	A	-
Ammonium Sulfate (NH4)2SO4	A	A	C	A	A	A	A	X	B	A/212° 80%	A	B	A	A	A
Ammonium Sulfide (NH4)2S	A	-	A	A	-	A	B	C	B	B	A	-	A	A	-
Ammonium Sulfite (NH4)2SO * 3H2O	A	-	-	-	A	-	A	C	X	B	A	X	A	A	-
Ammonium Thiocyanate NH4SCN	A	A	-	A	A	-	A	C	C	A/50%	B	-	A	-	A

Chemical/Formula	Elastomers										Metal			Plastic				
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Ammonium Thiosulfate (NH4)2S2O3	A	A	-	A	A	A	A	A/40%	X	A/10%	-	-	B	A	-			
n-Amyl Amine (1-Aminopentane) CH3CO2C3H11	C	X	-	X	A	-	X	-	-	-	-	-	-	A	-			
Amyl Borate C5H11B03	A	X	-	B	A	B	A	-	-	-	-	-	-	A	-			
Amyl Chloride (Chloropentane) CH3(CH2)4Cl	C	X	-	X	A	C	A	X	A	A	X	A	A	A	-			
Amyl Chloronaphthalene	X	-	-	X	A	C	A	-	-	-	-	-	-	A	-			
Amyl Naphthalene C15H18	X	X	-	X	A	C	A	-	-	-	-	-	-	A	-			
Amyl Phenol C6H4(OH)C5H11	X	-	-	-	A	-	A	A	A	A	-	A	-	A	-			
Anilene (Anilene Oil) (Amino Benzene) C6H5NH2	X	C	X	X	A	A	B	B	A	A	A	B	A	A	A			
Anilene Dyes	X	C	-	X	A	B	B	B	C	B	A	-	A	A	-			
Anilene Hydrochloride C3H5NH2 * HCl	C	-	-	X	A	A	B	X	X	X	X	A	A	A	-			
Animal Gelatin	A	A	-	A	A	A	A	-	-	A	A	-	A	A	-			
Anisole (Methylphenyl Ether) C6H5OCH3	C	-	-	X	A	-	X	B	B	B	-	B	-	A	-			
Ansul Ether	C	-	-	X	A	X	X	-	-	-	-	-	-	A	-			
Anthraquinone C14H8O2	A	-	-	-	A	-	B	B	B	B	-	A	-	A	-			
Anti-Freeze - Alcohol Base	A	A	A	A	A	A	A	A	A	A	A	A	A	A	-			
Anti-Freeze - Glycol Base	A	A	A	B	A	A	A	A	A	A	A	A	A	A	-			
Antimony Pentachloride SbCl3	X	-	-	-	A	-	A	A	A	A	-	A	-	A	-			
Antimony Trichloride SbCl5	B	A	-	-	A	-	A	B	A	A	A	B	A	A	-			
Aqua Regia (Nitric & Hydrochloric Acid)	X	X	-	X	A	X	B	X	X	X	C	C	A	A	X			
Aroclor PCB Mixtures	C	X	-	X	A	-	A	A	B	A	-	-	-	A	-			
Aromatic Hydrocarbons C6H5R	X	X	C	X	A	C	A	A	A	A	X	-	A	A	-			
Aromatic Solvents (Benzene, etc.)	C	X	X	X	A	-	A	A	B	A	B	-	A	A	-			
Arsenic Acid ASH3O4	B	A	-	A	A	A	A	A	X	B	A	B	A	A	A			
Arsenic Trichloride (Arsenic Butter) ASCl3	C	X	-	A	A	B	X	B	B	X	-	-	-	A	-			
Absorbic Acid C6H8O6	-	-	-	-	A	-	A	A	X	A	-	-	-	A	-			
Askarel (Pyranol) PCB Mixtures	B	X	-	X	A	X	C	-	-	A	-	-	-	A	-			
Asphalt Hydrocarbons	B	X	-	C	A	B	A	A	B	A	A	-	A	A	-			
Asphalt Topping	B	-	-	A	A	-	B	-	A	A	-	B	A	A	-			
ASTM - Ref Motor Fuel A (Aliphatic)	A	X	A/158°	B	A	C	A	A	A	A	-	-	-	A	-			
ASTM - Ref Motor Fuel B (30% Aromatic)	A	X	A/158°	X	A	X	A	A	A	A	-	-	-	A	-			
ASTM - Ref Motor Fuel C (50% Aromatic)	B	X	C	X	A	X	A	A	A	A	-	-	-	A	-			
ASTM - Ref Oil #1 (High Anilene)	A	X	A/212°	B	A	B	A	A	A	A	-	-	-	A	-			

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ASTM - Ref Oil #2 (Medium Anilene)	A	X	A	B	A	-	A	A	A	A	-	-	-	A	-
ASTM - Ref Oil #3 (Low Anilene)	A	X	A/212°	C	A	-	A	A	A	A	-	-	-	A	-
ASTM - Ref Oil #4 (High Anilene)	B	X	-	X	A	-	A	A	A	A	-	-	-	A	-
Aviation Gasoline	A	X	-	C	A	X	A	A	A	-	-	-	-	A	-
Barbeque Sauce Water, oils, spices	A	-	-	A	A	B	-	X	A	A	A	A	A	A	-
Barium Carbonate BaCO5	A	A	-	A	A	A	A	B	B	B	A	A	A	A	A
Barium Chloride Dihydrate BaCl2 * 2H2O	A	A	-	A	A	-	A	B/50%	B	B/212°	A	A	A	A	A
Barium Cyanide Ba(CN)2	C	-	X	A	-	A	A	-	-	A	X	-	-	A	-
Barium Hydroxide (Barium Hydrate) Ba(OH)2	A	A	B	A	A	A	A	X	B	B	A	A	A	A	-
Barium Nitrate Ba(NO3)2	A	-	-	A	A	A	-	B	A	A	A	B	A	A	A
Barium Sulfate (Blanc Fixed) BaSO4	A	A	X	A	A	A	A	B	B	B	A	A	A	A	A
Barium Sulfide Bas	A	A	-	A	A	A	A	X	-	B	A	A	A	A	-
Beef Extract	A	-	-	A	A	-	A	-	X	A	-	-	-	A	-
Beer Water, Carbonate	C	A	B	A	A	A	A	A	X	A	A/75°	A	A/175°	A	A
Beet Sugar Liquors (Sucrose)	A	A	-	A	A	A	A	A	B	A	A	A	A	A	-
Benzaldehyde C6H5CHO	X	B	B	X	A	B	X	A	A	A	X	-	A	A	A
Benzene (Benzol) C6H6	X	X	C/70°	X	A	C	B	B	B	A/167°	X	A	B	A	A
Benzene Sulfonic Acid C6H5DO3H	X	C	-	A	A	-	A	C	A	A	X	-	B/100°	A	A
Benzoic Acid (Benzene Carboxylic Acid) C6H5COOH	X	B	-	B	A	A	A	B	X	B	X	B	A	A	A
Benzoyl Chloride C6H2CCl	X	X	-	X	A	A	X	X	X	B	A	A	A	A	A
Benzyl Acetate CH3CO2 CH2C6H5	X	-	-	-	A	A	A	A	A	A	-	-	-	A	-
Benzyl Benzoate C6H5CO2CH2C6H5	X	B	-	X	A	C	A	A	B	B	-	-	-	A	-
Benzyl Chloride (Chlorotoluene) C6H5CH2Cl	X	X	-	X	A	C	A	X	A	B	X	-	A	A	-
Benzyl Dichloride (Benzal Chloride) C6H5CHCl	X	X	-	X	A	-	A	X	B	A	B	-	A	A	-
Benzol (Benzene) C6H6	X	X	C/70°	X	A	B	B	B	B	-	X	A	B	A	A
Biphenyl (Diphenyl) C6H5C6H5	X	X	-	X	A	-	A	A	A	-	-	-	-	A	-
Bismuth Subcarbonate (Bismuth Carbonate) (BiO)2CO3	A	A	-	A	A	-	A	-	-	B/10%	B	-	A	A	-
Black Sulfate Liquor	B	A	B	A	A	B	A	C	B	A	-	-	-	A	-
Blast Furnace Gas CO, H2, CH4, CO2, N2	C	-	B	A	A	-	A	-	-	-	-	-	-	A	-
Bleach Solutions Water, chlorine, oxygen	X	A	X	X	A	B	B	X	-	B	B/3%	-	A	A	-

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Borax (Sodium Borate) B4N2O2	B	A	A	A	A	A	A	B	B	A	A	A	A	A	A
Bordeaux Mixture Copper sulfate salts	A	A	B	A	A	A	-	-	-	-	-	-	-	-	-
Boric Acid (Boric Acid) H3BO3	A	A	A	A	A	A	A	A	X	A30%	A	C	A	A	A
Brake Fluid (non-petroleum base) Silicones or glycols	X	A	-	A	A	A	-	A	A	A	X	-	-	A	-
Brewery Slop	A	-	-	A	A	A	A	-	A	A	-	-	-	A	-
Brine (Sodium Chloride) Salt Water	A	A	B	A	A	A	A	-	X	A	A	-	A	A	-
Bromine - Anhydrous Br2	X	C	X	X	A	C	A	B	C	X	X	-	A150°	A	-
Bromine Trifluoride BrF3	X	X	-	X	A	C	X	A	-	B	X	-	-	A	-
Bromine Water	X	X	-	B	A	B	B	X	-	X	C	-	A	A	-
Bromobenzene C6H5Br	X	X	-	X	A	X	B	X	X	A	X	-	-	A	-
Bromochloromethane BrCH2Cl	X	B	-	X	A	-	C	X	B	B	-	-	-	A	-
Bromotoluene C6H4BrCH3	X	-	-	-	A	-	B	X	B	A	-	-	-	A	-
Bronzing Liquid	X	B	-	X	A	A	X	-	-	A	-	-	-	A	-
Butadiene C4H6	X	C	-	C	A	A	C	A	-	A	X	-	A	A	A
Butane (LPG) (Buty Hydride) C4H10	A	X	A	B	A	C	A	A	A	A	X	B	A	A	A
Butter Fats	A	A	B	C	A	A	A	A	X	A	A	-	-	A	-
Buttermilk Fats, water	A	-	-	A	-	A	A	A	X	A	A	-	A100°	A	-
Butyl Acetate CH3CO2(CH2)3CH3	X	B	-	X	A	C	X	A	A	A	X	-	B	A	-
n-Butyl Acetate CH3CO2(CH2)3CH3	X	B	-	X	A	B	X	A	A	A	-	-	-	A	-
Butyl Acetyl Ricinoleate C24H44O5	C	C	-	X	A	B	B	-	A	-	-	-	-	A	-
Butyl Acrylate CH2CHCO2C4H9	X	X	-	X	A	C	X	-	-	-	-	-	C	A	-
Butyl Amine (Aminobutane) CH3(CH2)CH2NH2	B	X	-	X	A	A	X	A	A	A	X	C	B/70°	A	A
Butyl Benzoate C6H5COO (CH2)3CH3	-	B	X	X	A	C	A	B	B	B	-	-	-	A	-
Butyl Butyrate CH3(CH2)2 CH2CO2C4H9	X	-	-	-	A	-	X	A	A	A	-	-	-	A	-
Butyl Carbitol CH3(CH2)3OCHCH2OCH2CH2OH	A	A	-	B	A	B	A	-	-	-	-	-	-	A	-
Butyl Cellulosolve HOCH2CH2OOC4H9	B	A	-	C	A	A	C	A	A	A	A	A	B	A	-
Butyl Chloride (Chlorobutane) CH3(CH2)3Cl	X	-	-	-	A	-	A	X	B	B	X	-	A	A	-
Butyl Ether (Dibutyl Ether) (CH3(CH2)3Cl	A	-	-	B	A	-	C	A	B	A	X	-	A/100°	A	A
Butyl Oleate C22H42O2	-	C	-	X	A	C	A	-	-	-	-	-	-	A	-
Butyl Stearate CH3(CH2)16CO2(CH2)3CH3	A	C	-	X	A	C	B	B	B	B	-	-	A	A	-

Chemical/Formula	Elastomers						Metal			Plastic					
	Buna N NBR	Nordel® EPDM	Hytel® TPE	Neoprene CR	PTFE	Santoprene® TPO	Viton® FPM	Aluminum T356	Cast Iron FC	Stainless Steel 316	Polypropylene PPS	Delrin (Acetal)	Kynar® PVDF	PTFE	Ryton
Rating Key: (A) Excellent; (B) Good; (C) Fair; (P) Poor; data limited to % concentration and/or temperature; (N) Not Recommended; (-) No Data Available Or Not Shown, Where Not Shown, Temperature is 70°F ambient.															
Butylene (Butene) C4H8	B	X	-	X	A	X	B	A	-	A	X	A	A	A	A
Butyraldehyde CH3(CH2)2CHO	X	C	-	X	A	C	X	A	A	A	-	B	A	A	-
Butyric Acid CH3(CH2)C(=O)2H	C	C	B	X	A	C	X	A	A	A	-	A	A	A	-
Butyric Anhydride (CH3CH2CH2CO)2O	C	C	B	X	A	A	C	A	X	B	X	A	A	A	A
Butyronitrile CH3CH2CH2CN	C	A	-	-	A	-	-	A	-	A	A	-	-	-	A
Calcium Acetate Hydrate Ca(CH3COO)2 * H2O	X	A	X	C	X	A	X	C	-	B	-	-	-	-	A
Calcium Bisulfite Ca(HSO3)2	B	A	-	C	A	-	X	C	C	B	-	-	A	A	-
Calcium Carbonate (Chalk) CaCO3	A	A	-	A	A	-	A	C	B	A/90°	X	A	A	A	A
Calcium Chlorate Ca(ClO3)2	A	A	-	A	A	A	A	C	B	B	A	A	A	A	-
Calcium Chloride (Brine) CaCl2 * 6H2O	A	A	-	A	A	-	A	B/30%	B	A/30%	A	A	A	A	-
Calcium Hydrosulfide (Calcium Sulfhydrate) Ca(HS)2 * 6H2O	A	A	-	A	A	A	A	-	A	A	X	A	A	A	A
Calcium Hydroxide (Slaked Lime) Ca(OH)02	A	A	-	A	A	A	A	X	B	B	A	A	A	A	-
Calcium Hypochlorite 20% (Calcium Oxichloride) Ca(ClO)2	C	B	X	X	A	A	A	X	X	B	A	A	A	A	A
Calcium Nitrate Ca(NO3)2	A	A	-	A	A	A	A	B/212° 40%	B/212° 30%	B/212° 40%	A	X	A	A	A
Calcium Oxide (Unslaked Lime) CaO	A	A	B	A	A	B	A	A	A	A	B	A	A	A	-
Calcium Silicate Ca2SiO4	A	-	-	-	A	-	A	A	B	A	-	-	A	A	-
Calcium Sulfate (Gypsum) CaSO4	A	A	-	A	A	A	A	C	B/10%	A/10%	X	A	A	A	A
Calcium Sulfide CaS	A	A	-	B	A	A	A	A/20%	B	B	A/10%	A	A	A	-
Calcium Sulfite CaSO3 * 2H2O	A	A	-	A	A	A	A	B/10%	B	A/10%	B/70°	A	A	A	-
Calgon (NaPO3)6	A	-	-	A	-	A	-	-	X	A	A	-	-	A	-
Cane Juice Sucrose, water	A	-	-	A	-	A	A	B	A	A	X	-	-	A	-
Cane Sugar Liquors	A	A	B	A	A	A	B	A	A	A	-	A	A	A	-
Capryl Alcohol (Octanol) CH3(CH2)6CH2OH	A	C	-	B	A	-	B	A	A	A	-	-	-	A	-
Caprylic Acid (Octanoic Acid) CH3(CH2)6COOH	C	-	-	-	A	-	-	A	-	A	-	A	A	A	-
Carbamate H2NCO2R	C	C	-	C	A	A	A	-	-	-	-	-	A	A	-
Carbitol CH3CH2OCH2CH2 OCH2CH2OH	B	C	-	C	A	B	C	A	A	A	-	-	A	A	-
Carboic Acid (see Phenol) C6H5OH	X	C	X	C	A	C	A	B	A	B	C	X	A/150°	A	-
Carbon Dioxide (Carbonic Acid Gas) CO2	A	B	A	A	A	B	A	A	A	A	A	A	A	A	A
Carbon Disulfide (Carbon Bisulfide) CS2	X	X	C	X	A	X	A	A	B	A/90°	X	B	A	A	A

Chemical/Formula	Elastomers						Metal			Plastic					
	Buna N NBR	Nordel® EPDM	Hyvel® TPE	Neoprene CR	PTFE	Santoprene® TPO	Viton® FPM	Aluminum 1395	Cast Iron FC	Stainless Steel 316	Polypropylene PPS	Delrin (Acetal)	Kynar® PVDF	PTFE	Ryton
Rating Key: (A) Excellent; (B) Good; (C) Fair to Poor; data limited to % concentration and/or temperature; (X) Not Recommended; (-) No Data Available 0°F shown, Where not shown, temperature is 70°F ambient.															
Carbon Monoxide CO	C	C	A	A	A	A	C	A	A	A	A	A	A	A	-
Carbon Tetrachloride R10 (Tetrachloro-methane) CCL4	C	X	X	X	A	X	A	X	C	B	X	A	A	A	A
Carbonated Beverages C02/H20	B	B	A/50%	X	A	A	A	X	X	A	A	A	A	A	A
Carbonic Acid (liquid) H2CO3	B	-	C	A	A	A	A	A	X	B	A	A	A	A	A
Casein a phosphoprotein	A	A	-	A	A	-	A	B	-	B	-	-	-	A	-
Catsup (Ketchup)	A	A	-	C	A	A	A	B	X	A	A	-	-	A	-
Cellulosolve (Glycol Ethers) HOCH2CH2OR	C	C	X	C	A	C	B	A	-	A	A/100°	A	A	A	A
Cellulose Acetate C8H12O5	B	-	-	B	A	-	C	B	B	A	C	-	-	A	-
Cellulube Hydraulic Fluids (Phosphate Esters)	X	A	C	X	A	X	B	A	A	A	-	-	-	A	-
Chlorinated Lime - 35% Bleach CA(ClO)2	C	A	X	X	A	X	A	-	X	A	-	-	-	A	-
Chlorinated Water	C	-	X	C	A	-	A	X	X	B	B	A	A	A	-
Chlorine - Dry CL2	C	-	X	C	A	-	A	X	-	B	X	A	A	A	-
Chlorine - Wet Cl2/H20	C	X	X	X	A	C	A	B	C	A	X	A	A	A	X
Chlorine - Anhydrous Liquid Cl2	X	-	-	X	A	C	A	X	X	X	-	A	A	-	-
Chlorine Dioxide ClO2	X	C	-	X	A	X	B	B	-	X	X	A	A	A	-
Chlorine Trifluoride ClF3	X	X	-	X	B	X	B	A	-	A	X	-	-	-	-
Chloroacetic Acid (Monochloroacetic Acid) ClCH2COOH	X	B	X	C	A	-	C	X	X	X	A	A	A	A	A
Chloroacetone (Monochloroacetone) ClCH2COCH3	X	A	-	C	A	C	C	X	B	B	X	-	-	A	-
Chlorobenzene (Monchlorobenzene) C6H5Cl	X	X	X	X	A	C	A	X	B	B	X	A	A/150°	A	A
Chlorobutadiene (Chloroprene) C4H5Cl	X	X	-	X	A	C	A	X	B	B	X	-	-	A	-
Chlorobromomethane ClCH2Br	X	-	-	X	A	X	A	X	B	B	X	-	-	A	-
Chloroform CHCl3	X	X	X	X	A	X	A	X	A	A	X	A	A	A	A
1-Chloronaphthalene C10H7Cl	X	X	-	X	A	X	C	X	B	B	X	-	-	A	-
Chlorosulfonic Acid HSO3Cl	X	X	X	X	A	X	X	B	B	B	X	X	A	A	X
o-Chlorophenol C6H5ClO	X	X	-	X	A	-	B	B	B	B	-	B	A	A	A
Chlorothene (Chlorinated Solvents) CH3CCl3	X	-	-	X	A	-	C	X	X	A	-	-	-	A	-
Chlorotrifluoroethylene C2H2ClF	X	-	-	-	A	-	-	B	B	B	-	-	-	A	-
Chlorox	C	A	X	B	A	B	A	-	X	A	B	A	A	A	-
Chocolate Syrup Corn Syrup, water, sugar	A	-	-	A	A	A	-	-	X	A	A	-	-	A	-

Chemical/Formula	Elastomers						Metal			Plastic					
	Buna N NBR	Nordel® EPDM	Hytel® TPE	Neoprene CR	PTFE	Santoprene® TPO	Viton® FPM	Aluminum T395	Cast Iron FC	Stainless Steel 316	Polypropylene PPs	Delrin (Acetal)	Kynar® PVDF	PTFE	Ryton
Rating Key: (A) Excellent; (B) Good; (C) Fair to Poor; data limited to % concentration and/or temperature; (N) Not Recommended; (-) No Data Available 0°F shown. Where not shown, temperature is 70°F ambient.															
Chromic Acid - to 25% H2CrO	X	A	X	X	A	A	A	X	X	X	C	X	A/120%	A	A
Chromic Acid - Over 25% H2CrO4	X	C	X	X	A	A	A	X	X	X	C	X	A/120%	A	A
Cider (Apple Juice) Sucrose, water	A	B	B	A	A	A	A	B	X	A	-	-	-	A	-
Citric Acid C6H8O7 * H2O	B	A	A	A	A	A	A	C	X	A/30%	A	B	A	A	A
Citrus Pectin Liquor	A	-	-	A	A	-	A	-	-	A	A	-	-	A	-
Cobalt Chloride CoCl2 * 6H2O	A	C	-	A	A	A	A	X	-	-	A	-	-	A	-
Coffee Fatty oils, acids, cellulose, water	A	-	-	A	A	A	-	A	-	A	A	-	-	A	-
Coke Oven Gas H2(53%), CH4(26%) N2(11%), CO(7%)&hydrocarbons (3%)	C	-	-	C	A	B	A	-	-	-	-	-	A	A	-
Copper Acetate Cu(C2H2O2)2 * CuO * 6H2O	B	A	-	C	A	A	A	X	A/90%	B/10%	A	-	A	A	-
Copper Chloride CuCl2 * 2H2O	A	A	A	A	A	A	A	X	X	X	A	-	A	A	-
Copper Cyanide CuCN	A	A	-	A	A	A	A	X	A	A/10%	A	-	A	A	A
Copper Fluoroborate	B	-	-	A	-	A	A	X	X	X	-	-	-	A	-
Copper Nitrate Hexahydrate Cu(NO3)2 * 6H2O	A	A	-	A	A	A	A	X	X	A	A	A	A	A	A
Copper Sulfate (Blue Copperas) CuSO4 * 5H2O	A	A	A	A	A	A	A	X	X	A/10%	A	A	A	A	A
Copper Sulfide CuS	A	-	-	-	A	-	A	-	-	-	-	-	-	A	-
Cream	A	-	-	C	A	A	A	-	X	A	A	-	-	A	-
Creosote, Wood-Tar Mixture of phenols	A	X	X	B	A	B	A	B	B	A	X	X	-	A	-
Cresylic Acid (cresol) C8H10O2	C	X	-	X	A	B	A	B	C	A	X	A/150°	A	A	-
Crotonaldehyde CH3CHCHCHO	X	-	-	A	A	-	A	A	A	A	-	-	-	A	-
Cumene (Isopropylbenzene) C6H5CH(CH3)2	X	X	-	X	A	-	A	B	B	B	-	-	-	A	-
Cyclohexane C6H12	B	X	A	X	A	C	A	B	B	B	X	A	A	A	A
Cyclohexanol C6H11OH	B	X	-	A	A	B	A	C	B	A	B	A/150°	A	A	A
Cyclohexanone C6H10O	X	C	-	X	A	C	X	B	B	B	X	A	A	A	A
Cyclopentane C5H10	B	X	-	A	A	-	A	B	B	B	-	-	-	A	-
Cymene (Isopropyltoluene) C10H14	C	X	-	X	A	-	A	-	-	-	-	-	-	A	-
Decahronaphthalene (Decalin) C10H18	X	X	-	X	A	-	A	-	-	-	-	-	-	A	-
Decanal CH3(CH2)8CHO	X	X	-	-	A	-	X	-	-	-	-	-	-	A	-
Decane CH3(CH2)8CH3	B	C	-	X	A	C	A	-	-	-	A/70%	-	-	A	-
Detergent Solutions	A	A	B	A	A	A	A	B	-	A	A	-	-	A	A
Developing Fluids & Solutions	A	C	X	A	A	B	A	-	X	A	-	-	-	A	-

Chemical/Formula	Elastomers						Metal			Plastic					
	Buna N NBR	Nordel® EPDM	Hytel® TPE	Neoprene CR	PTFE	Santoprene® TPO	Viton® FPM	Aluminum 1395	Cast Iron FC	Stainless Steel 316	Polypropylene PPs	Delrin (Acetal)	Kynar® PVDF	PTFE	Ryton
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Dextrose C6H12O6	B	A	B/140%	B	A	B	A	A	X	A	A	A	A	A	-
Dibenzyl Ether (C6H5CH2)2O	X	C	-	X	A	C	C	B	B	B	B	C	A	A	-
Dibenzyl Sebecate C24H304	X	C	A	X	A	C	B	-	-	-	-	-	A	A	-
Dibutyl Amine (C4H9)2NH	C	C	X	-	X	A	C	X	-	A	A	B/70%	A	A	-
Dibutyl Phthalate (DBP) C6H4(CO2C4H9)2	X	A	A	A	X	A	A	B	A	A	X	-	X	A	A
Dibutyl Sebecate (DBS) C18H34O4	X	C	-	X	A	B	C	-	A	A	C	-	-	A	-
Dichloroacetic Acid Cl2CHCOOH	X	-	-	X	A	B	X	-	-	-	-	-	-	A	-
o-Dichlorobenzene C6H4Cl2	X	X	X	X	A	X	A	X	B	B	B	A/150%	A	A	-
Dichlorobutane C4H8Cl2	X	-	-	-	A	-	A	-	-	-	-	-	-	A	-
Dichloroethyl Ether [ClCH2CH2]2O	X	-	-	-	A	-	A	B	-	-	-	-	-	A	-
Dichloro Isopropyl Ether C6H12OC12	X	X	-	X	A	X	X	-	-	-	X	-	-	A	-
Dichlorohexylamine (C6H11)2NH	X	X	-	X	A	B	B	-	-	-	-	-	-	A	-
Diethanol Amine (HOCH2CH2)2NH	B	-	-	A	A	-	-	-	A	A	A	-	-	A	-
Diethyl Amine (CH3CH2)2NH	C	C	-	C	A	-	X	B	B	A	A	A	-	A	-
Diethyl Benzene C6H4(C2H5)2	X	X	-	X	A	C	A	-	-	-	-	-	-	A	-
Diethyl Carbonate (C2H5O)2CO	X	-	-	X	A	-	-	-	A	-	-	-	-	A	-
Diethyl Ether (Ether) (CH3CH2)2O	B	X	C	C	A	A	X	B	A	A	X	A	A	A	A
Diethyl Phthalate (DEP) C6H4(CO2C2H5)2	X	-	-	-	-	-	C	A	A	A	-	-	-	-	-
Diethyl Sebecate C14H26O4	X	C	A	X	A	B	B	A	A	A	A/120°	A/120°	A	A	-
Diethylene Ether (Dioxane) C4H8O2	X	A	-	X	A	B	X	A	A	A	-	-	-	A	-
Diethylene Glycol (DEG) HOCH2CH2OCH2CH2O	A	A	A	A	A	A	A	A	A	A	A	-	-	A	-
Diethylene Triamine (NH2C2H4)2NH	B	-	-	-	A	-	-	A	A	A	-	-	-	A	-
Diisobutyl Ketone C4H9COC4H9	X	B	-	X	A	-	X	A	A	A	B	-	-	A	-
Diisobutylene [HC=C(CH2)2]	B	-	-	C	A	C	C	-	-	-	A	A	-	A	A
Diisodecyl Adipate (DIDA) C26H50O4	X	-	-	-	A	-	C	-	-	-	-	-	-	A	-
Diisodecyl Phthalate (DIDP) C28H47O4	X	A	-	X	A	-	C	-	-	-	-	-	-	A	-
Diisooctyl Adipate (DIOA) C22H42O4	X	-	-	-	A	-	C	A	A	A	-	-	-	A	-
Diisooctyl Phthalate (DIOP) C24H39O4	X	-	-	-	A	-	C	-	-	-	-	-	-	A	-
Diisooctyl Sebecate (DIOS) C26H46O4	-	B	-	-	A	-	A	-	-	-	-	-	-	A	-
Diisopropyl Amine [(CH3)2CH]2NH	B	-	-	-	A	-	-	-	-	-	-	-	-	A	-
Diisopropyl Benzene C6H4 * [CH(CH3)2]2	X	X	-	X	A	C	A	-	-	-	-	-	-	A	-
Diisopropyl Ketone [(CH3)2CH]2CO	X	A	-	X	A	C	X	-	-	A	-	-	-	A	-
N, N-Dimethylaniline C6H5N(CH3)2	X	C	-	X	A	B	X	B	B	-	X	A	A	A	A
Dimethyl Ether CH3OCH3	A	-	-	B	A	-	A	B	B	B	-	-	-	A	-

Chemical/Formula	Elastomers						Metal			Plastic					
	Buna N NBR	Nordel® EPDM	Hytel® TPE	Neoprene CR	PTFE	Santoprene® TPO	Viton® FPM	Aluminum T395	Cast Iron FC	Stainless Steel 316	Polypropylene PPs	Delrin (Acetal)	Kynar® PVDF	PTFE	Ryton
Rating Key: (A) Excellent; (B) Good; (C) Fair to Poor; data limited to % concentration and/or temperature; (N) Not Recommended; (-) No Data Available; (T) Show, Where Not Shown, Temperature is 70°F, ambient.															
N,N-Dimethyl Formamide (DMF) HCON(CH3)2	C	B	C	X	A	A	X	A	-	A	A/120°	B	A/120°	A	A
Dimethyl Phthalate C6H4(CO2CH3)2	X	B	B	X	A	A	B	A	-	A	X	-	A/70°	A	A
Dimethyl Sulfate (CH3)2SO4	X	-	-	-	A	-	X	A	A	-	-	-	-	A	-
Dimethyl Sulfide (CH3)2S	X	-	-	-	A	-	-	A	A	-	-	-	-	A	-
Dinitrotoluene (DNT) CH3C6H3(NO2)2	X	X	-	X	A	B	C	-	-	A	-	-	-	A	-
Diethyl Phthalate (DOP) C24H38O4	X	B	A	X	A	B	B	A	A	-	-	-	-	A	-
Diethyl Sebecate C26H50O4	X	C	-	X	A	C	C	A	A	-	-	-	-	A	-
Dioxolanes (Dioxolans) Glycol ethers	X	B	-	X	A	C	C	-	-	-	-	-	-	A	-
Dipentene (Limonene) C10H16	B	X	-	X	A	C	A	A	A	-	-	-	-	A	-
Diphenyl Oxides (Phenyl Ether) C6H5OC6H5	X	C	-	X	A	C	A	B	A	A	-	-	A	A	-
Dipropylamine (CH3CH2CH2)2 NH	B	-	-	-	A	-	-	-	-	-	-	-	-	A	-
Dipropylene Glycol (C3H6OH)2O	A	-	-	-	A	A	A	-	-	-	A	-	A	A	-
Dipropyl Ketone (Butyrene) (C3H7)2CO	X	-	-	-	A	-	-	-	-	-	-	-	-	A	-
Divinyl Benzene (DVB) C6H4(CH=CH)2	X	-	-	-	A	-	A	-	-	-	-	-	-	A	-
Dodecyl Benzene (Alkane) C6H5(CH2)11CH3	X	-	-	-	A	-	A	A	A	-	-	-	-	A	-
Dow Corning (Silicones) [(CH3)2SiO]2	A	-	-	A	A	A	A	A	-	A	-	-	-	A	-
Dowtherm (Biphenyl & Phenyl Ether) (C6H5)2 AND (C6H5)2O	X	X	-	X	A	X	A	A	B	A	-	-	-	A	-
Dry Cleaning Fluids Chlorinated hydrocarbons	C	-	-	X	A	X	A	X	A	A	X	-	-	A	-
Dyes	-	-	-	C	-	B	A	B	-	A	-	-	-	A	-
Epichlorohydrin C3H5ClO	X	B	X	X	A	B	X	A	A	A	A	A	X	A	A
Epsom Salts (Magnesium Sulfate) MgSO4 * 7H2O	A	A	-	A	A	A	A	A	-	A	A	-	A	A	-
Ethane C2H6	A	X	-	C	A	C	A	A	A	A	C	A	-	A	-
Ethanolamine (Aminoethanol) H2NCH2 CH2OH	B	B	-	C	A	A	X	B	A	A	X	X	C	A	A
Ethyl Acetate CH3COOC H2CH3	X	B	C	X	A	A	X	A	A	A	B	A	A	A	-
Ethyl Acetoacetate CH3COCH2 (Acetoacetic Ester) COOCH2CH3	X	C	-	X	A	C	X	A	A	A	-	-	A/70°	A	-
Ethyl Acrylate CH2CHCO CH2CH3	X	C	-	X	A	C	X	A	A	A	B	-	B/70°	A	-
Ethyl Aluminum Dichloride CH3CH2AlCl2	X	-	-	-	A	-	B	-	-	-	-	-	-	A	-
Ethyl Amine (Monoethylamine) CH3CH2NH	X	A	-	C	A	-	X	B	B	A	-	-	-	A	-

Chemical/Formula	Elastomers						Metal			Plastic					
	Buna N NBR	Nordel® EPDM	Hyrel® TPE	Neoprene CR	PTFE	Santoprene® TPO	Viton® FPM	Aluminum 1395	Cast Iron FC	Stainless Steel 316	Polypropylene PPS	Delrin (Acetal)	Kynar® PVDF	PTFE	Ryton
Rating Key: (A) Excellent; (B) Good; (C) Fair to Poor; data limited to % concentration and/or temperature; (N) Not Recommended; (-) No Data Available Off shown. Where not shown, temperature is 70°F ambient.															
Ethyl Benzene CH3CH2C6H5	X	X	-	X	A	X	A	B	B	B	X	A	A	A	-
Ethyl Benzoate C6H5CO2CH2CH3	X	C	-	X	A	C	A	A	A	A	B	-	-	A	-
Ethyl Bromide (Bromoethane) CH3CH2Br	X	B	-	B	A	X	-	X	A	A	-	-	-	A	-
Ethyl Butyl Acetate CH3CO2CH2 CH(2H5)2	X	-	-	-	A	-	X	-	-	-	-	-	-	A	-
Ethyl Butyl Ketone CH3CH2COC4H9	X	-	-	-	A	-	X	-	-	-	-	-	-	A	-
Ethyl Butyraldehyde C6H12O	X	-	-	-	A	-	X	-	-	-	-	-	-	A	-
Ethyl Butyrate CH3CH2CH2 CO2C2H5	X	X	-	X	A	-	C	B	A	A	B	-	-	A	A
Ethyl Caprylate CH3(CH2)5 CO2C2H5	X	X	-	X	A	-	-	-	-	-	-	-	-	A	-
Ethyl Cellosolve C2H5O(CH2)2OH	C	B	-	C	A	B	X	-	-	-	-	-	-	A	-
Ethyl Cellulose (Ethocel)	B	B	B	B	A	A	C	B	A	B	C	-	-	A	B
Ethyl Chloride (Chloroethane) C2H5Cl	A	A	X	C	A	X	A	X	B	A	X	A	A	A	A
Ethyl Chloroacetate (Ethyl Chloroformate) ClCO2C2H5	-	-	-	C	A	A	A	-	-	-	-	-	-	A	-
Ethyl Cyanide (Propionitrile) C2H5CN	X	A	-	B	A	-	X	-	-	-	-	-	-	A	-
Ethyl Formate HCOOCH2 CH3	X	C	-	B	A	B	A	B	A	B	-	-	-	A	-
Ethylexyl Acetate CH3CO2CH2 CH(C2H5)C4H9	X	-	-	-	A	-	X	A	-	A	A	A/70°	A	A	-
Ethylhexyl Alcohol (Ethylhexanol) C8H17OH	A	-	-	-	A	-	B	A	A	A	-	-	-	A	-
Ethyl Iodide CH3CH2I	-	-	-	-	-	-	-	-	-	-	-	-	-	A	-
Ethyl Isobutyrate (CH3)2	X	X	-	X	A	-	-	-	-	-	-	-	-	A	-
Ethyl Mercaptan (Ethanethiol) CH3CH2SH	X	X	-	C	A	C	B	B	A	B	-	-	-	A	-
Ethyl Oxalate C2H5O2C CO2C2H5	X	A	-	X	A	B	B	-	-	-	-	-	-	A	-
Ethyl Pentachlorobenzene C2H5C6Cl5	X	-	-	X	A	X	A	X	-	-	X	-	-	A	-
Ethyl Propionate CH3CH2 COOCH2CH3	X	X	-	X	A	-	-	A	A	A	-	-	-	A	-
Ethyl Silicate Si(OCH2CH3)4	A	A	-	A	A	B	A	B	A	A	-	-	-	A	-
Ethyl Sulfate C2H5OSO2OH	A	-	-	-	A	B	A	-	-	X	-	-	-	A	-
Ethylene (Ethene) C2H4	B	C	-	A	A	C	A	A	A	A	-	-	-	A	-
Ethylene Chlorohydrin ClCH2CH2OH	X	A	X	B	A	C	B	-	B	A	X	-	-	A	-
Ethylene Diamine (CH2)2(NH2)2	B	A	-	A	A	A	X	C	A	A	A	A/70°	A	A	-
Ethylene Dibromide (Ethylene Bromide) Br(CH2)2Br	X	C	-	X	A	-	B	X	X	B	X	A	A	A	-
Ethylene Glycol (Ethylene Alcohol (Glycol) Cl(CH2)2Cl	A	A	B	A	A	A	A/70°	A	A	A	A/120°	A	A	A	A

Chemical/Formula	Elastomers						Metal			Plastic					
	Buna N NBR	Nordel® EPDM	Hyrel® TPE	Neoprene CR	PTFE	Santoprene® TPO	Viton® FPM	Aluminum 1355	Cast Iron FC	Stainless Steel 316	Polypropylene PPs	Delrin (Acetal)	Kynar® PVDF	PTFE	Ryton
Rating Key: (A) Excellent; (B) Good; (C) Fair to Poor; data limited to % concentration and/or temperature; (X) Not Recommended; (-) No Data Available Or Not Shown; Where Not Shown, temperature is 70°F ambient.															
Ethylene Glycol Monobutyl Ether (Butyl Cellulosolve) C4H9OCH2CH2OH	B	B	-	X	A	A	C	A	A	A	B	B	A	A	-
Ethylene Glycol Monobutyl Ether Acetate (Cellulosolve Acetate) C2H5O(CH2)2 O2CCH3	C	B	-	X	A	-	C	A	A	A	-	A	-	A	-
Ethylene Glycol Monomethyl Ether (Methyl Cellulosolve) CH3O(CH2)2OH	C	B	-	C	A	B	X	B	B	A	-	-	-	A	-
Ethylene Oxide (CH2)2O	X	B	A	X	A	A	C	A	B	A	C	-	A	A	X
Ethylene Trichloride (Trichloroethene) ClCHCCl2	X	X	-	X	A	X	A	X	A	A	X	-	-	A	-
Ethylidene Chloride CH3CHCl2	X	X	-	X	A	-	-	X	B	A	-	-	-	A	-
Fatty Acids C8H20+1COOH	B	X	B	C	A	B	A	X	X	A	B	A	A	A	-
Ferric Chloride FeCl3	A	A	B	A	A	A	A	X	X	X	A	A	A	A	A
Ferric Hydroxide FeHO2	B	A	-	-	A	-	C	-	-	A	-	A	-	A	-
Ferric Nitrate Fe(NO3)3	A	A	-	A	A	A	A	X	X	B	A	A	A	A	A
Ferric Sulfate Fe2(SO4)3	A	A	-	A	A	A	A	C	X	B	A	A	A	A	A
Ferrous Chloride FeCl2	A	A	X	A	A	A	A	X	X	B/20%	A	A	A	A	A
Ferrous Sulfate FeSO4	A	A	A	A	A	A	A	A/10%	C	B	A	A	A	A	A
Fluoboric Acid (Fluoroboric Acid) HBF4	A	A	X	B	A	A	C	X	X	A/30%	A	A	A	A	A
Fluorine (Liquid) F2	X	C	X	C	A	X	B	A	-	A	X	A	A/70°	A	-
Fluorbenzene FC6H5	X	X	-	X	A	C	A	-	-	-	X	A	-	A	-
Fluosilicic Acid (Sand Acid) H2SiF6	B	B	-	A	A	A	A	X	X	A/212°	A	A	A	A	A
Formaldehyde (Formalin) HCHO	B	A	C/40°	C	A	A	A	A	C	A/90%	A	A	A/120°	A	A
Formamide HCONH2	A	A	-	A	A	-	X	A	B	B	A	-	-	A	-
Formic Acid HCOOH	C	B	C	B	A	A	C	X	X	C	A/70%	A	A	A	A
Freon 11 (Trichlorofluoromethane) CCl3F	C	X	A	C	A	C	B	B	A	A	B	A	A	A	A
Freon 12 (Dichlorofluoromethane) Cl2CF4	B	B	B	B	A	X	B	A	A	A	-	A	A	A	-
Freon 13 (Chlorofluoromethane) ClCF3	A	A	C	A	A	X	A	A	A	A	-	A	-	A	-
Freon 13B1 (Bromotrifluoromethane) BrCF3	A	A	-	A	A	-	A	-	-	-	-	-	-	A	-
Freon 14 (Tetrafluoromethane) CF4	X	B	-	X	A	-	-	-	-	-	-	-	-	A	-
Freon 21 (Dichlorofluoromethane) FCHCl2	X	X	-	B	A	X	X	A	-	-	-	A	A	A	-
Freon 22 (Chlorofluoromethane) HCClF2	X	C	X	B	A	X	X	A	A	A	-	A	A	A	-
Freon 113 (Trichlorotetrafluoroethane) Cl3CCF3	B	X	A/130°	A	A	X	B	B	-	A	-	A	A	A	-

Chemical/Formula	Elastomers							Metal			Plastic				
	Buna N NBR	Nordel® EPDM	Hyrel® TPE	Neoprene CR	PTFE	Santoprene® TPO	Viton® FPM	Aluminum 1395	Cast Iron FC	Stainless Steel 316	Polypropylene PPs	Delrin (Acetal)	Kynar® PVDF	PTFE	Ryton
Rating Key: (A) Excellent; (B) Good; (C) Fair to Poor; data limited to % concentration and/or temperature. (X) Not Recommended; (-) No Data Available Or Not Shown. Where not shown, temperature is 70°F ambient.															
Freon 114 (Dichlorotetrafluoroethane) C2Cl2F4	A	C	A	A	A	X	A	B	-	A	-	A	A	A	-
Freon 114B2 (Dibromotetrafluoroethane) C2Br2F4	B	X	-	A	A	X	B	-	-	-	-	A	-	A	-
Freon 115 (Chloropentafluoroethane) C2ClF5	A	A	-	A	A	X	B	A	-	-	-	A	-	A	-
Fruit Juices Water, sucrose	A	A	B	A	A	A	A	A/10%	X	A	A	A	A	A	A
Fumaric Acid (Boletic Acid) Hydrocarbons	C	-	-	B	A	A	A	-	-	-	-	-	A	A	-
Furan (Furfuran) C4H4O	X	X	X	X	A	B	C	-	-	-	C	A	X	A	A
Furfuryl Alcohol C5H6O2	X	B	B	-	A	A	X	A	A	A	-	A	B/100%	A	-
Galic Acid C6H2(OH)3 COOH	B	B	X	C	A	B	A	A/20%	X	B	A	A/70%	A	A/70%	A
Gasoline (unleaded) C4 to C12 hydrocarbons	X	X	A/120°	X	A	X	A	A	A	A	C	A	A	A	A
Gasoline (Petrol) Hydrocarbons	A	X	A	C	A	X	A	A	A	A	C	A	A	A	A
Gelatin Water soluble proteins	A	A	B	A	A	A	B	A	A	A	A	B	A	A	-
Glauber's Salt (Sodium Sulfate Decahydrate) Na2so4 * 10H2O	A	B	B	A	A	-	A	-	-	-	-	-	-	A	-
Gluconic Acid C6H12O7	C	A	-	-	A	-	A	B	C	A/50%	A	-	-	A	-
Glucose (Corn Syrup) C6H12O6	A	A	B	A	A	A	A	A	A	A	A	A	A	A	-
Glue	A	B	B	A	A	A	A	A	A	B	A	-	A	A	-
Glycerol (Glycerine) C3H8O3	A	A	A	A	A	A	A	A	B	A	A	A	A	A	A
Glycolic Acid HOCH2COOH	A	A	-	A	-	A	A	-	-	-	A	-	A	A	A
Glycols	A	A	A	A	A	A	A	A	B	A	A	A	A	A	A
Gold Monocyanide AuCN	A	-	-	A	-	A	A	-	-	X	-	-	-	A	-
Grape Juice Water, sucrose	C	-	-	X	A	A	A	-	X	A	A	A	A	A	-
Grease	A	-	A	X	A	B	A	A	-	A	-	-	-	A	-
Green Sulfate Liquor	B	A	X	B	A	A	A	B	C	A	A	-	-	A	-
Halowax Chlorinated naphthalenes	X	X	X	-	-	X	A	X	-	-	-	-	-	-	-
Heptanal CH3(CH2)5CHO	A	-	-	-	-	-	A	A	A	A	A	A	A	A	A
Heptane C7H16	A	X	B	C	A	X	A	A	A	A	C/140°	A	A	A	A
Hexanal CH3(CH2)4CHO	B	B	-	B	A	-	C	A	B	A	-	-	-	A	-
Hexalin (Cyclohexanol) C6H11OH	B	C	-	A	A	-	A	-	-	-	-	-	-	A	-
n-Hexane C6H14	A	X	A	B	A	B	A	A	A	A	C/140°	A	A	A	A
n-Hexane 1 (Hexylene) H2CCH(CH2)2CH3	A	X	-	B	A	X	A	-	-	-	X	A	A	A	-

Chemical/Formula	Elastomers						Metal			Plastic					
	Buna N NBR	Nordel® EPDM	Hyvel® TPE	Neoprene CR	PTFE	Santoprene® TPO	Viton® FPM	Aluminum 1395	Cast Iron FC	Stainless Steel 316	Polypropylene PPS	Delrin (Acetal)	Kynar® PVDF	PTFE	Ryton
Rating Key: (A) Excellent; (B) Good; (C) Fair to Poor; data limited to % concentration and/or temperature; (N) Not Recommended; (-) No Data Available 0°F shown. Where not shown, temperature is 70°F ambient.															
Hexylene Glycol (Brake fluid) C6H12(OH)2	X	C	-	A	A	-	A	A	A	A	-	-	-	A	-
Honey	-	-	-	A	A	-	A	A	A	A	-	-	-	A	-
Hydrazine (Diamine) H2NNH2	C	A	X	C	A	X	A	X	X	X	X	B	X	A	-
Hydrobromic Acid HBr	X	A	-	C	A	A	A	X	X	B	X	X	A	A	A
Hydrochloric Acid 10% HCl	B	A	-	B	A	A	X	C	X	A	X	X	A	A	A
Hydrochloric Acid 20% HCl	C	A	X	B	A	A	X	C	X	A	X	X	A	A	A
Hydrochloric Acid 37% (Conc.) HCl	C	A	X	C	A	B	X	X	X	A	X	X	A	A	A
Hydrocyanic Acid (Formonitrile) HCN	B	A	X	C	A	A	A	A/10%	X	A	X	X	A	A	-
Hydrofluoric Acid (Conc.) Cold HF 49%	X	B	X	X	A	B	A	X	X	X	X	X	A	A	A
Hydrogen Fluoride (Anhydrous) HF	X	C	X	C	A	A	A	X	X	A	-	A	A	A	-
Hydrogen Peroxide 3% H2O2	B	A	X	B	A	A	A	-	-	A	-	A/120°	A	A	X
Hydrogen Peroxide 10% H2O2	C	A	X	C	A	A	A	B	A	A	-	A/120°	A	A	X
Hydrogen Peroxide 30% H2O2	C	A	X	X	A	A	A	X	X	A	-	A/120°	A	A	X
Hydrogen Peroxide 90% H2O2	X	B	X	B	A	X	A	A	X	-	-	A/120°	A	A	X
Hydrogen Sulfide (Wei) H2S	X	A	A	C	A	X	A	A/90%	X	A/167°	A	C	A	A	A
Hydroquinone C6H4(OH)2	C	-	-	X	A	A	C	A/90%	B	A/10%	-	-	A	A	-
Hydroxyacetic Acid - 10% HOCH2COOH	X	A	-	X	A	A	-	B	-	B	-	-	-	A	-
Hypochlorous Acid HClO	X	B	-	X	A	A	A	X	X	X	-	-	A	A	-
Ink	A	-	-	A	A	A	A	C	X	B	-	-	A	A	-
Iodine I2	B	B	B	B	A	A	A	A	X	X	-	-	A/150%	A	X
Iodoform CHI3	-	A	-	-	A	-	A	A	A	A	-	-	A	A	-
Isoamyl Acetate CH3CO2CH2CH2CH(CH3)2	X	B	-	X	A	-	X	A	A	-	-	-	-	A	-
Isoamyl Butyrate C9H18O2	X	-	-	-	A	-	X	A	A	-	-	-	-	A	-
Isoamyl Chloride (CH3)2CHCH2CH2Cl	X	X	-	X	A	-	X	X	-	-	-	-	-	A	-
Isobutyl Acetate CH3CO2CH2CH(CH3)	X	C	-	X	A	-	X	A	A	-	-	-	-	A	-
Isobutyl Amine (CH3)2CHCOOH	X	-	-	-	A	X	-	A	-	-	-	-	-	A	-
Isobutyl Chloride (CH3)2CHCH2Cl	X	-	-	-	A	B	X	X	B	B	-	-	-	A	-
Isobutyric Acid (CH3)2CHCOOH	X	A	-	B	A	-	A	A	-	-	-	-	-	A	-
Isododecane (CH3)2CH(CH2)8CH3	B	X	-	A	A	-	A	B	B	B	-	-	-	A	-
Isooctane (Trimethylpentane) C8H18	A	X	A	B	A	C	A	A	A	A	-	-	A	A	A
Isopentane (CH3)2CHCH2CH3	A	-	-	-	A	-	A	-	-	-	-	-	-	A	-
Isophorone C9H14O	X	C	-	X	A	B	X	A	A	-	-	-	-	A	-
Isopropyl Acetate CH3COOCH(CH3)2	X	B	-	X	A	B	X	A	A	B	-	-	-	A	-

Chemical/Formula	Elastomers						Metal			Plastic					
	Buna N NBR	Nordel® EPDM	Hyrel® TPE	Neoprene CR	PTFE	Santoprene® TPO	Viton® FPM	Aluminum T356	Cast Iron FC	Stainless Steel 316	Polypropylene PPs	Delrin (Acetal)	Kynar® PVDF	PTFE	Ryton
Rating Key: (A) Excellent; (B) Good; (C) Fair to Poor; data limited to % concentration and/or temperature. (N) Not Recommended; (-) No Data Available Or Shown. Where not shown, temperature is 70°F ambient.															
Isopropyl Amine C3H7NH2	X	-	-	-	A	-	X	-	A	A	-	-	-	A	-
Isopropyl Chloride (CH3)2CHCl	X	X	-	X	A	C	B	X	A	A	X	-	-	A	-
Isopropyl Ether (CH3)2CHOCH	C	X	-	C	A	B	C	B	-	A	X	-	A/70%	A	-
Jet Fuels (JP1 to JP6) (ASTM-A, A1 & B)	A	X	X	C	A	X	A	A	A	A	X	A	A	A	A
Kerosine (Kerosene) Hydrocarbons	A	X	A	C	A	X	A	A	A	A	X	A	A	A	A
Lacquers	X	X	X	X	A	C	X	A	B	A	-	B	-	A	-
Lacquer Solvents	X	X	C	X	A	C	X	A	B	A	C	B	X	A	-
Lactic Acid CH3CHOH COOH	B	A	X	B	A	A	A	A	X	A	C	C	A	A	A
Lactol (Aliphatic Naptha Solvent) CH3CHOH CO3C10H7	C	-	-	X	A	-	A	A	A	A	-	-	-	A	-
Latex Rubber emulsion	A	A	A	A	A	A	A	A	-	A	B	-	-	A	-
Lead Acetate (Sugar of Lead) Pb(CH3CO2)2	B	A	-	A	A	A	X	X	-	B	A	-	A	A	A
Lead Chloride PbCl2	-	-	-	B	A	-	-	X	-	B	A	-	A	A	-
Lead Nitrate Pb(NO3)2	B	A	-	A	A	-	A	X	B	B	A	A	A	A	-
Lead Sulfamate	B	-	-	A	A	A	A	-	-	-	A	-	-	A	-
Ligroin (Ligroine (Benzene) Petroleum fraction	A	X	-	B	A	B	A	-	A	A	X	-	-	A	-
Lignin Liquor Blend of natural aromatic oils	A	-	-	A	A	-	A	-	-	A	-	-	-	A	-
Lime Bleach	A	A	-	C	A	A	A	X	-	-	B	-	-	A	-
Lime Slurries	B	-	C	A	A	B	B	B	-	B	-	-	-	A	-
Lime, Soda (Slaked lime & soda ash) CaO	B	A	-	B	A	A	B	-	-	-	-	-	-	A	-
Lime Sulfur CaS + CaSO4	A	A	-	A	A	B	A	X	-	A	A	-	-	A	-
d-Limonene C10H16	C	X	-	X	A	-	A	A	-	A	-	-	A	A	-
Linoleic Acid C18H32O2	B	X	-	X	A	B	B	A	-	A	A	-	A	A	-
Lindol (Tritioyl Phosphate) C21H21O4P4	X	-	-	C	A	A	B	-	-	-	-	-	-	A	-
Lithium Bromide LiBrH2O	A	-	-	X	A	-	A	-	A	-	A	A	A	A	A
Lye (Potassium Hydroxide) KOH	C	A	X	B	A	A	B	-	-	A	X	A/150°	A	A	A
Magnesium Carbonate MgCO3	A	C	A	A	A	A	A	A	B	B	A	A	A	A	-
Magnesium Chloride MgCO2O	A	A	A	A	A	A	A	A/20%	B/30%	B/40%	A	A	A	A	A
Magnesium Hydroxide (Milk of Magnesia) Mg(OH)2	B	A	C	B	A	A	A	A/10%	A	A	A	A	A	A	A
Magnesium Nitrate Mg(NO3)2 * 6H2O	A	A	-	A	A	A	A	B/50%	B	A	-	A	A	A	A
Magnesium Oxide MgO	A	-	-	A	A	A	B	A/10%	A	A	-	-	-	A	-

Chemical/Formula	Elastomers						Metal			Plastic					
	Buna N NBR	Nordel® EPDM	Hyrel® TPE	Neoprene CR	PTFE	Santoprene® TPO	Viton® FPM	Aluminum T305	Cast Iron FC	Stainless Steel 316	Polypropylene PPs	Delrin (Acetal)	Kynar® PVDF	PTFE	Ryton
Rating Key: (A) Excellent; (B) Good; (C) Fair to Poor; data limited to % concentration and/or temperature; (N) Not Recommended; (-) No Data Available Or Not Shown. Where not shown, temperature is 70°F ambient.															
Methyl Iodide CH3I	X	A	-	X	A	A/70%	-	X	A	A	-	-	-	A	-
Methyl Isobutyl Ketone (Hexone) CH3COCH2CH (CH3)2	X	B	X	X	A	C	X	A	B	B	C/70%	A	A/70%	A	A
Methyl Isopropyl Ketone CH3COCH(CH3)2	X	C	X	X	A	C	X	-	-	A	C	-	A/70%	A	-
Methyl Methacrylate CH2C(CH3) CO2CH3	X	X	-	X	A	B	C	B	-	A	A	-	A/70%	A	-
Methyl Oleate C19H36O2	X	C	-	X	A	C	B	-	-	-	-	-	-	A	-
Methyl Propyl Ketone CH3CH2 CH2COCH3	X	B	-	X	A	-	X	-	-	-	-	-	-	A	-
Methacrylic Acid CH3CHCHCO2H	-	-	-	B	A	A	B	-	-	-	-	-	-	A	-
Methylamine CH3NH2	B	A	-	A	A	A	A	B	B	A	A	-	-	A	-
Methyl Bromide CH2Br2	X	-	-	X	A	-	B	X	A	A	-	-	A	A	-
Methylene Chloride CH2Cl2	X	X	X	X	A	X	B	X	B	A/90%	X	-	B/100°	A	A
Milk	B	A	B	A	A	A	A	A	X	A	A	A	A	A	-
Wine Water	A	-	-	-	A	B	-	B	-	B	-	-	-	A	-
Mixed Acids (Sulfuric & Nitric) H2SO4, HNO3	X	B	-	X	A	-	A	X	X	B	X	A	A	A	-
Molasses	A	A	B	A	A	A	A	A	A	A	A	-	A	A	A
Monochlorobenzene C6H5Cl	X	-	C	X	A	X	A	X	A	A	X	B	A/100%	A	A
N-Methyl Aniline C6H5NHCH3	X	-	-	X	A	-	C	-	-	-	C	A	-	A	-
Monoethanolamine NH2C2H4OH	B	-	-	C	A	A	C	B	A	A	A	-	X	A	A
Monomethyl ether	A	-	-	B	A	-	A	-	-	-	A	X	-	A	-
Monovinyl Acetylene	A	-	-	B	A	-	A	-	-	-	-	-	-	A	-
Mustard	C	-	B	A	A	A	X	B	X	A	A	-	-	A	-
Naphtha (Petroleum spirits) (Thinner) Petroleum fractions	A	X	A	X	A	X	A	A	B	A	X	A	A	A	A
Naphtha Coal Tar (Benzol) Hydrocarbons	X	X	-	X	A	-	A	A	B	A	-	-	-	A	-
Naphthalene (Tar Camphor) C10H8	X	X	C	X	A	C	A	B	A	A	A	A	A	A	A
Naphthoic Acid C11H8O2	B	X	-	-	A	-	A	B	B	A	-	-	-	A	-
Neohexane (2, 2-dimethylbuane) C6H14	A	-	-	-	A	-	A	-	-	-	-	-	-	A	-
Neosol	A	B	-	A	A	-	C	B	B	A	-	-	-	A	-
Neville Acid	C	C	-	C	A	A	B	-	-	-	-	-	-	A	-
Nickel Acetate Ni(CH3CO2)2	B	A	-	B	A	A	X	B/10%	-	A	A	-	A	A	-
Nickel Chloride NiCl2	A	A	X	A	A	A	A	X	X	B	A	B	A	A	A
Nickel Nitrate Ni(NO3)2 * 6H2O	A	A	-	A	A	-	A	X	-	A	A	-	A	A	A

Chemical/Formula	Elastomers						Metal			Plastic					
	Buna N NBR	Nordel® EPDM	Hytel® TPE	Neoprene CR	PTFE	Santoprene® TPO	Viton® FPM	Aluminum T395	Cast Iron FC	Stainless Steel 316	Polypropylene PPS	Delrin (Acetal)	Kynar® PVDF	PTFE	Ryton
Rating Key: (A) Excellent; (B) Good; (C) Fair to Poor; data limited to % concentration and/or temperature; (X) Not Recommended; (-) No Data Available 0°F shown, Where not shown, temperature is 70°F ambient.															
Nickel Sulfate NISO4	A	A	-	A	A	A	A	X	X	A/40%	A	A	A	A	A
Nitrana (Ammonia Fertilizer)	B	-	-	B	A	-	C	-	-	A	-	-	-	A	A
Nitric Acid 10% HNO3	X	B	C	B	A	A	A	A	X	A	A	A	A	A	X
Nitric Acid 25% HNO3	X	B	X	C	A	B	A	X	X	A	A	A	A	A	X
Nitric Acid 35% HNO3	X	C	X	X	A	B	A	X	X	A	A	A	A	A	X
Nitric Acid 50% HNO3	X	X	X	X	A	X	A	X	X	A	A	A	A	A	X
Nitric Acid 70% HNO3	X	X	X	X	A	X	A	-	X	A	X	A	A	A	X
Nitric Acid Concentrated HNO3	X	X	X	X	A	X	B	A	X	A	X	A/120°	A	A	X
Nitric Acid Red Fuming	X	X	X	X	A	B	B	A	X	A	X	C	A	A	-
Nitrobenzene C6H5NO2	X	X	X	X	A	A	B	A	A	A	B	A/70°	A	A	-
Nitroethane C2H5NO2	X	C	-	C	A	A	X	A	A	A	C	A/70%	A	A	-
Nitrogen Tetroxide N2O4	X	X	B/50%	X	A	-	C	A	B	A	X	C	A	A	-
Nitromethane CH3NO2	X	C	X	C	A	A	X	A	A	A	C	A/120°	A	A	A
1-Nitropropane CH3(CJ2)2NO2	X	A	-	C	A	-	X	A	A	A	-	-	A	A	-
Octadecane CH3(CH2)16CH3	A	X	-	B	A	B	A	-	-	-	-	-	A	A	-
n-Octane C8H18	A	X	-	-	A	B/70%	A	-	-	-	X	A	A	A	-
Octyl Acetate CH3COO (CH2)7CH3	X	-	-	-	A	-	X	A	-	A	-	-	A	A	-
Octachlorotoluene C7Cl8	X	-	-	X	A	-	A	X	-	-	X	-	A	A	-
OILS (A thru D)															
Almond Oil (artificial)	X	B	-	X	A	X	X	-	-	-	-	-	A	A	-
Amyl Acetate (Banana Oil)	X	A	C	X	A	B	X	A	B	A	X	A/120°	A	A	A
Animal Fats & Oil	A	B	B	X	A	C	A	A	B	A	-	A	A	A	-
Bunker Oil (fuel #5, #6, #7)	A	X	-	B	A	B	A	A	A	A	-	-	A	A	-
Castor Oil	A	B	B	A	B	A	A	A	B	A	-	-	A	A	-
Cinnamon Oil	-	-	-	X	A	C	-	-	X	A	-	-	A	A	-
Citric Oils	C	B	-	X	A	A	A	-	X	A	A	-	A	A	-
Clove Oil (eugenol)	-	-	-	B	A	-	-	-	X	A	-	-	A	A	-
Coconut Oil (Coconut Butter)	B	A	-	B	A	B	A	B	A	A	-	-	A	A	-
Cod Liver Oil (Fish Oil)	B	A	-	X	A	C	A	A	X	A	-	-	A	A	-
Corn Oil (Maize Oil)	A	C	A	X	A	A	A	B	C	B	A	A	A	A	-
Cotton Seed Oil	A	A	A	X	A	B	A	A	C	A	B	A	A	A	A
Creosote, Coal-Tar (Tar Oil)	A	X	X	X	A	X	A	B	B	B	X	-	A	A	-
Cutting Oil (water soluble)	B	-	-	X	A	B	A	A	A	A	-	-	A	A	-
Cutting Oil (Sulfur Base)	A	-	-	C	A	B	-	A	A	A	-	-	A	A	-

Chemical/Formula	Elastomers						Metal			Plastic					
	Buna N NBR	Nordel® EPDM	Hyrel® TPE	Neoprene CR	PTFE	Santoprene® TPO	Viton® FPM	Aluminum T395	Cast Iron FC	Stainless Steel 316	Polypropylene PPs	Delrin (Acetal)	Kynar® PVDF	PTFE	Ryton
Rating Key: (A) Excellent; (B) Good; (C) Fair to Poor; data limited to % concentration and/or temperature; (N) Not Recommended; (-) No Data Available Or Not Shown. Where not shown, temperature is 70°F ambient.															
Phenyl Hydrazine C6H5NHNH2	X	X	-	X	A	B	A	A	X	-	X	-	A/120°	A	-
Phorone (Diisopropylidene Acetone) C9H14O	X	C	-	X	A	B	A	-	-	-	-	-	-	-	-
Phosphoric Acid 10% H3PO4	A	A	-	B	A	A	A	X	X	A	A/120°	A	A	A	A
Phosphoric Acid 20% H3PO4	C	A	-	B	A	A	A	X	X	A/212°	A/120°	A	A	A	A
Phosphoric Acid 50% H3PO4	X	A	-	B	A	A	A	X	X	A	A/120°	A	A	A	A
Phosphoric Concentrated H3PO4	X	B	X	C	A	C	A	X	X	A/212°	A/120°	A	A	A	A
Phosphorus Oxychloride POCl3	-	-	-	X	A	-	-	B	B	B	-	-	A	A	-
Phosphorus Trichloride PCl3	X	A	-	X	A	A	A	C	B	A	X	-	A	A	A
Photographic Developer	A	-	X	A	-	A	A	C	X	A	A	C	A	A	A
Pickling Solution	-	X	X	X	A	A	B	-	-	-	-	-	-	A	-
Picric Acid (Carbazotic Acid) (NO2)3 C6H2OH	B	B	X	B	A	X	A	A	C	A	B	-	A	A	-
Pinene C10H16	B	X	-	X	A	C	A	-	-	-	-	-	-	A	-
Piperidine C5H11N	X	X	-	X	A	B	X	-	-	-	-	-	-	A	-
PLATING SOLUTIONS															
Cadmium	B	-	-	B	A	A	-	-	-	A	X	-	B	A	-
Chrome	X	C	-	X	A	A	A	-	-	-	X	X	B	A	X
Lead	B	-	-	B	A	A	-	-	-	-	A	A	B	A	X
Others	A	A	-	C	A	A	B	-	-	A	-	-	-	A	-
Polyol	X	A	X	X	A	X	A	A	A	A	-	-	-	-	-
Polyvinyl Acetate Emulsion PVAc = H2O	-	A	-	C	A	A	-	-	-	A	A	A	A	A	-
Potassium Acetate CH3CO2K	B	A	-	B	A	A	X	B/10%	A	B	A	-	A	A	-
Potassium Bicarbonate KHCO3	A	-	-	A	A	A	A	B	B/40%	A/30%	A	-	A	A	A
Potassium Bisulfate KHSO4	A	-	-	A	A	-	A	A/10%	X	A/10%	A	-	A	A	-
Potassium Bisulfite KHSO3	A	-	-	A	A	-	A	B/10%	-	B/10%	-	-	-	A	-
Potassium Bromide KBr	A	A	-	A	A	A	A	A	B/80% 212°	B/90% 212°	A	-	A	A	A
Potassium Carbonate (Potash) K2CO3	A	A	-	A	A	A	A	X	B	B	A	B	A	A	A
Potassium Chlorate KClO3	A	A	-	A	A	A	A	X	B	A/60%	A	B	A	A	A
Potassium Chloride KCl	A	A	-	A	A	A	A	X	B	A	A	B	A	A	A
Potassium Chromate K2CrO4	A	-	-	A	A/40%	A	A	A	A	A	A	-	A	A	-
Potassium Copper Cyanide K3[Cu(CN)4]	A	A	-	A	A	-	A	-	-	-	A	-	-	A	-
Potassium Cyanide KCN	A	A	-	A	A	A	A	C	B	B/90% 212°	A	C	A	A	A

Chemical/Formula	Elastomers						Metal			Plastic					
	Buna N NBR	Nordel® EPDM	Hytel® TPE	Neoprene CR	PTFE	Santoprene® TPO	Viton® FPM	Aluminum T356	Cast Iron FC	Stainless Steel 316	Polypropylene PPs	Delrin (Acetal)	Kynar® PVDF	PTFE	Ryton
Rating Key: (A) Excellent; (B) Good; (C) Fair to Poor; data limited to % concentration and/or temperature; (N) Not Recommended; (-) No Data Available; (F) shown, Where not shown, temperature is 70°F ambient.															
Rubber Latex Emulsions (C5H8)n/H2O	-	-	-	-	A	-	A	A	-	A	-	-	-	A	-
Rubber Solvents (Petroleum Distillate) Hydrocarbons	X	-	-	C	A	-	X	A	-	A	-	-	-	A	-
Rum Alcoholic liquor from molasses	A	A	-	A	A	A	B	-	-	A	-	-	-	A	-
Rust Inhibitors	A	-	-	C	-	B	A	-	-	A	A	-	-	A	-
Salad Dressing Fats, oils, water	A	-	-	-	-	A	A	B	X	A	A	-	-	A	-
Sal Ammonian (Ammonium Chloride) NH4Cl	A	-	A	A	A	A	A	X	X	A	-	X	-	A	A
Sal Soda (Sodium Carbonate) NaCO3	A	A	-	A	A	B	A	X	A	A	-	-	-	A	-
Saicyclic Acid HOC6 H4COOH	B	A	-	B	A	-	B	A	X	B	A	-	A	A	-
Salt Water (Brine) NaCl/H2O	A	A	A	B	A	A	A	B	X	A	A	-	A	A	-
Sea Water (Brine)	A	A	A	B	A	A	A	A	C	A	A	A	A	A	A
Sewage	A	C	B	B	A	A	A	B	B	A	A	-	A	A	-
Silicate Esters Si(OR)4	B	X	C	A	A	B	A	-	-	-	-	-	-	A	-
Silver Cyanide AgCN	-	-	-	A	A	-	-	X	A	A	A	-	A	A	-
Silver Nitrate AgNO3	B	A	-	A	A	A	A	X	X	A	A/60%	-	A	A	A
Skydrol Hydraulic Fluid (Phosphate Ester Base)	X	A	A	X	A	A	C	A	A	A	-	-	-	A	-
Soap Solutions Salt of fatty acid in H2O	A	A	A	B	A	A	A	C	X	A	A	A	A	A	A
Soda Ash (Sodium Carbonate) Na 2CO3	A	A	B	A	A	A	A	X	A	A	A	-	-	A	-
Sodium Acetate CH 3COONa	C	A	-	C	A	A	X	A	A	A	A	A	A	A	A
Sodium Aluminate Na 2AL2O4	A	-	-	A	A	A	A	-	A/40%	A/40%	A	-	A	A	-
Sodium Bicarbonate (Baking Soda) NaHCO3	A	A	B	A	A	A	A	B	C	A/20%	A	X	A	A	A
Sodium Bisulfite (Niter Cake) NaHSO 4	A	A	B	A	A	A	A	B/50%	C	B/50%	A	C	A	A	A
Sodium Bisulfate NaHSO3	C	A	B	A	A	A	A	B	B/20%	A/50%	A	X	A	A	-
Sodium Borate Na 2B4O7	A	A	B	A	A	A	A	B	-	A	A/140%	C	A	A	A
Sodium Bromide NaBr	-	B	-	B	A	-	A	C	C	B/30%	A	-	A	A	-
Sodium Chlorate NaClO 3	A	A	-	B	A	A	A	B/70% 212°	B	B	A	B	A	A	A
Sodium Chloride (Table Salt) NaCl	A	A	A	A	A	A	A	B	B/30%	A	A	A	A	A	A
Sodium Chromate Na 2CrO4	A	-	A	A	A	A	A	A/80% 212°	A/60%	A/60%	A	-	A	A	-
Sodium Cyanide NaCN	A	A	A	A	A	A	A	X	A	A	C	A	A	A	A
Sodium Dichromate (Sodium Bichromate) Na 2Cr2O7 * 2H2O	-	A	X	B	A	-	A	-	-	-	A	-	A	A	A

Chemical/Formula	Elastomers										Metal			Plastic				
	Buna N NBR	Nordel® EPDM	Hytel® TPE	Neoprene CR	PTFE	Santoprene® TPO	Viton® FPM	Aluminum T395	Cast Iron FC	Stainless Steel 316	Polypropylene PPs	Delrin (Acetal)	Kynar® PVDF	PTFE	Ryton			
Rating Key: (A) Excellent; (B) Good; (C) Fair to Poor; data limited to % concentration and/or temperature. (X) Not Recommended; (-) No Data Available. (O/F) shown. Where not shown, temperature is 70°F ambient.																		
Sulfur S	X	A	A	B	A	A	A	A	A	A	A	A	A	A	A			
Sulfur Chloride S2Cl2	C	X	C	X	A	X	A	B	X	B	A	A	A	A	A			
Sulfur Dioxide SO2	X	B	X	A	A	A	A	A	B	A/10%	A	A	A	A	A			
Sulfur Hexafluoride SF6	B	A	A	A	A	A	A	-	-	-	-	-	-	-	-			
Sulfur Trioxide SO3	C	C	X	C	A	C	A	B	B	B	X	X	A	A	-			
SULFURIC ACID																		
10% H2SO4	B	A	X	A	A	A	A	X	X	A	A	A	A	A	-			
25% H2SO4	C	B	X	B	A	A	A	X	X	B	A	A	A	A	X			
50% H2SO4	X	B	X	B	A	A	A	X	X	X	A	A	A	A	X			
60% H2SO4	X	B	X	C	A	A	A	X	X	X	A	A	A	A	X			
75% H2SO4	X	C	X	X	A	A	A	X	C	C	A	A	A	A	X			
95% H2SO4	X	C	X	X	A	A	A	X	B	A	X	A	A	A	X			
Concentrated H2SO4	X	C	X	X	A	B	A	X	B	B	X	A	A	A	-			
Fuming H2SO4/Y2SO3	X	X	X	X	A	-	B	C	X	X	X	X	A	A	-			
Sulfurous Acid H2SO3	B	A	C	X	A	A	A	B	X	B	A	A	A	A	A			
Tall Oil (Liquid Rosin) Rosin acids	A	X	-	B	A	A	A	X	B/212°	B	A	A	A	A	-			
Tallow Fat from cattle, sheep	A	-	-	-	A	B	A	A	-	A	B	A	A	A	-			
Tannic Acid C76H52O46	C	C	A/10%	B	A	A	A	A	A	A	A	A	A	A	A			
Tanning Liquors Tannic acid	A	-	-	B	A	A	-	A	-	A	A	A	A	A	-			
Tar, Bituminous Mixture of aromatic (Coal Tar) (Pitch) & phenolic hydrocarbons	B	X	B	C	A	B	A	A	-	A	A	-	A	A	-			
Tartaric Acid C4H6O6	B	B	B	A	A	A	A	A/20%	X	A	X	A	A	A	A			
Terpenes C10 hydrocarbons	C	X	-	X	A	-	A	A	X	-	-	-	A	A	-			
Terpineol (Terpienol) C10H18O	C	C	-	X	A	B	A	A	A	X	-	B/120°	A	A	-			
Tertiary Butyl Alcohol (CH3)3COH	A	A	-	A	A	B	A	A	-	-	-	-	A	A	-			
Tertiary Butyl Catechol C9H14O2	X	A	-	B	A	B	A	C	B	B	-	-	A	A	-			
Tertiary Butyl Mercaptan C4H10S	X	-	-	X	A	B	A	B	-	-	-	-	A	A	-			
Tetra Bromomethane CBr4	X	-	-	X	A	X	A	X	-	-	X	-	A	A	-			
Tetrabutyl Titanate Ti(C4H9)4	B	B	-	A	A	B	A	-	-	-	-	-	A	A	-			
Tetrachloroethylene Cl2C = CCl2	-	-	-	-	A	X	A	B	-	A	X	A	A	A	-			
Tetrachlorodifluoroethane (Cl2FC)2	X	-	-	X	A	-	A	-	-	-	-	-	A	A	-			
Tetrachloroethane (Acetylene Tetrachloride) (Cl2HC)2	X	X	-	X	A	X	A	X	A	C	X	A	A	A	-			
Tetraethyl Lead Pb(C2H5)4	B	X	-	X	A	C	B	B	A	A	A	A	A	A	-			

Chemical/Formula	Elastomers						Metal			Plastic					
	Buna N NBR	Nordel® EPDM	Hyvel® TPE	Neoprene CR	PTFE	Santoprene® TPO	Viton® FPM	Aluminum 1355	Cast Iron FC	Stainless Steel 316	Polypropylene PPs	Delrin (Acetal)	Kynar® PVDF	PTFE	Ryton
Rating Key: (A) Excellent; (B) Good; (C) Fair to Poor; data limited to % concentration and/or temperature; (N) Not Recommended; (-) No Data Available 0°F shown, Where not shown, temperature is 70°F ambient.															
Tetraethylene Glycol (TEG) HOCH2 (CH2OCH2)3CH2OH	A	-	X	-	A	-	A	-	-	-	-	-	-	A	-
Tetrahydrofuran (THF) C4H8O	X	C	C	X	A	X	X	-	-	A	C/100°	A	B/70°	A	A
Tetrahydronaphthalene (Tetralin) C10H12	X	X	-	X	A	-	A	A	A	A	C	-	-	A	A
Thionyl Chloride SOCl2	X	X	-	X	A	B	X	X	X	X	B	B	X	A	-
Thiophene C4H4S	X	X	-	X	A	-	C	-	-	-	-	-	-	A	-
Titanium Tetrachloride TiCl4	C	X	-	X	A	X	A	X	A	B	B	-	B	A	-
Toluene (Toluol) C7H8	C	X	C	X	A	X	B	A	A	A	X	B	A	A	A
Toluene Diisocyanate CH3C6H3 (NCO)2	-	A	B	X	A	B	A	A	-	-	-	-	-	A	-
Toluidine CH3C6 H4NH2	X	-	-	-	A	-	B	A	A	A	-	-	-	A	-
Tomato Pulp & Juice	A	-	-	-	A	A	A	B	-	A	A	-	A	A	A
Toothpaste	A	A	-	C	A	-	A	X	A	A	A	-	-	A	-
Transmission Fluid (Type A)	A	X	B	C	A	C	A	A	A	A	-	-	-	A	-
Triacetin C3H5 (OCOCH3)3	A	A	-	B	A	A	X	B	-	-	-	-	-	A	-
Triallyl Phosphate P(OC3H5)3	X	A	-	C	A	-	A	-	-	-	B	-	A	A	-
Triaryl Phosphate (C6H5O)3PO	X	-	-	C	A	-	A	-	-	-	-	-	-	A	-
Tributoxy Ethyl Phosphate (C4H9O)3P(C2H5)	X	A	-	X	A	B	B	-	-	-	-	-	-	A	-
Tributyl Phosphate (TBP) (C4H9)3PO4	X	C	C	X	A	B	X	A	A	A	B/100°	-	A/100°	A	-
Tributyl Mercaptan (C4H9)2S	X	-	-	X	A	-	A	-	-	-	-	-	-	A	-
Trichloroacetic Acid (TCA) CCl3COOH	C	C	X	B	A	B	X	X	X	X	B	-	B	A	A
Trichlorobenzenes C6H3Cl3	X	-	-	X	A	-	B	A	A	A	-	-	-	A	-
Trichloroethane C2H3Cl3	X	X	-	X	A	X	B	A	A	A	X	-	A	A	A
Trichloroethylene (Ex-Tri) (Hi-Tri) C2HCl3	X	X	X	X	A	X	C	X	B	A/90% 167°	X	B	A	A	A
Trichloropropene CH2ClCH ClCH2Cl	X	-	-	X	A	X	B	X	A	A	X	-	-	A	-
Tricesyl Phosphate (Lindol) (TCP) (CH3C6H4O)3 PO	X	A	C	C	A	B	C	-	A	B	B	-	X	A	-
Triethanol Amine (TEA) C12H25 CH2OH	X	B	X	A	A	A	C	A	A	A	A	B	X	A	A
Trethyl Aluminum (ATE) N(C2H4OH)3	X	-	-	X	A	B	B	-	-	-	-	-	-	A	-
Triethyl Amine (CH3CH2)3N	A	-	-	B	A	-	-	-	-	A	C	-	A/120°	A	-
Triethyl Borane (C2h5)3B	X	-	-	X	A	B	A	-	-	-	-	-	-	A	-
Triethylene Glycol (TEG) (CH2OCH-2CHOH)2	A	-	X	-	A	-	A	A	A	A	A	-	-	A	-
Trimethylene Glycol HO(CH2)3OH	A	A	-	-	A	-	A	A	A	A	-	-	-	A	-

Chemical/Formula	Elastomers						Metal			Plastic					
	Buna N NBR	Nordel® EPDM	Hytel® TPE	Neoprene CR	PTFE	Santoprene® TPO	Viton® FPM	Aluminum T356	Cast Iron FC	Stainless Steel 316	Polypropylene PPs	Delrin (Acetal)	Kynar® PVDF	PTFE	Ryton
Rating Key: (A) Excellent; (B) Good; (C) Fair to Poor; data limited to % concentration and/or temperature; (X) Not Recommended; (-) No Data Available 0°F shown. Where not shown, temperature is 70°F ambient.															
Trinitrotoluene (TNT) CH3C6H2(NO2)3	X	X	-	B	A	A	B	-	-	-	-	-	-	A	-
Triocyl Phosphate (C8H17O)3PO	X	A	-	X	A	B	-	-	-	-	-	-	-	A	-
Turpentine C10H16	A	X	B	X	A	X	A	A	A	X	A	A	A	A	A
Unsymmetrical Dimethyl Hydrazine (UDMH) H2NN(CH3)2	C	A	-	C	A	B	-	-	-	-	A	A	A	A	-
Urea (Carbamide) CO(NH2)2	B	A	B	B	A	A	B	-	B/50%	A	-	A	A	A	A
Urine	A	-	-	X	A	A	A	A	A	A	A	A	A	A	-
Valeric Acid CH3(CH2)COOH	X	A	-	X	A	-	A	-	-	-	-	-	A	A	-
Vanilla Extract (Vanillin) C6H3(CHO) (OCH3)(OH)	A	-	-	X	A	-	-	-	A	-	-	-	-	A	-
Varnish Oil, gum resins, oil of turpentine	B	X	-	C	A	-	A	-	A	A	A	A	A	A	-
Vegetable Juices	A	-	-	C	A	A	C	-	A	A	A	-	A	A	-
Vinegar Dilute acetic acid	C	A	C	B	A	A	C	X	A	A	A	A	A	A	A
Vinyl Acetate CH2COOC HCH2	X	A	-	B	A	-	B	A	A	B	-	A	A	A	-
Vinyl Chloride (Chlorethylene) CH2CHCl	X	C	-	X	A	X	X	X	A	A	X	-	B	A	-
Water Distilled H2O	A	A	A	B	A	A	A	A	C	A	A	A	A	A	A
Water Fresh H2O	A	A	A	B	A	A	A/70°	A	A	A	A	A	A	A	A
Waxes Hydrocarbons	A	X	-	A	A	-	A	-	A	-	A	-	-	A	-
Weed Killers	B	-	-	C	-	B	A	X	-	-	-	-	-	A	-
Whiskey Ethanol, esters, acids	B	A	B	A	A	A	A	X	A	A	B	A	A	A	-
White Sulfate Liquor	B	A	-	A	A	-	B	C	A	A	-	A	A	A	-
Wines	A	A	A	A	A	A	B	X	A	A	-	A	A	A	-
Wort, Distillery Sugar solution from malt	-	-	-	A	A	-	A	A	A	A	A	A	A	A	-
Xylene (Xylo) C6H4(CH3)2	X	X	C	X	A	X	A	A	B	X	-	A	A	A	A
Xylidines (Xylidin) (CH3)2C6H3NH2	-	X	-	X	A	C	X	B	-	-	-	-	-	A	-
Zeolite Hydrated alkali aluminum silicates	C	A	-	C	A	A	-	-	A	-	-	-	-	A	-
Zinc Acetate Zn(C2H3O)2	C	A	-	B	A	A	C	-	-	A	-	A	A	A	-
Zinc Carbonate ZnCO3	A	-	-	-	A	-	B	-	B	-	-	-	-	A	-
Zinc Chloride ZnCl2	B	A	A	B	A	A	A/10%	B	A/10%	A	B	A	A	A	A
Zinc Hydrosulfite ZnHSO3	A	-	-	A	A	A	X	-	A	-	-	-	-	A	-
Zinc Sulfate ZnSO4	A	A	X	A	A	A	B/20%	X	B	A	B	A	A	A	A

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