

# Fluid Resistance Data For Common Gasket And Seal Elastomers

**Rating Legend: 1 = Excellent , 2 = Good , X = NOT RECOMMENDED , - = Insufficient Information**

Chemical Name	Common Form	TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC			
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G			
		<b>A</b>																	
Absorption Oil	Liquid	1	2	2	X	X	1	X	X	2	X	1	2	1	1	-			
Acetal	Colorless Liquid (bp 218 F)	1	1	1	1	1	-	-	-	-	1	X	-	1	-	-			
Acetaldehyde	Colorless Liquid (bp 68 F)	1	1	1	1	1	X	2	2	X	1	X	X	1	2	X			
Acetamide	Liquid above 80 C	1	1	2	1	2	2	-	-	-	2	X	-	1	-	-			
Acetic Acid (40% or less)	Clear Colorless Liquid	1	1	1	1	1	X	X	X	2	1	X	2	1	-	-			
Acetic Acid (56% or less)	Clear Colorless Liquid	1	1	1	1	1	X	X	X	2	1	X	2	1	X	2			
Acetic Acid (85% or less)	Clear Colorless Liquid	1	1	1	1	2	X	X	X	2	2	X	-	1	X	X			
Acetic Acid (Glacial - 99.4%)	Clear Colorless Liquid	1	1	X	1	X	X	X	X	-	2	X	-	1	X	X			
Acetic Acid, Anhydride	Clear Colorless Liquid	1	-	X	-	-	X	X	X	X	2	-	2	1	X	X			
Acetic Anhydride (Acetic Oxide)	Colorless Liquid (bp 140 C)	1	1	1	1	1	-	X	X	-	2	X	2	1	X	-			
Acetic Ether (Ethyl Acetate)	Colorless Liquid (bp 77 C)	1	1	1	1	1	X	X	X	-	1	X	-	1	-	-			
Acetic Oxide (Acetic Anhydride)	Colorless Liquid (bp 140 C)	1	1	1	1	1	-	X	X	-	2	X	2	1	X	-			
Acetone (Dimethylketone)	Colorless Liquid (bp 56 C)	1	1	X	1	2	X	X	X	X	2	X	X	1	1	X			
Acetone Cyanohydrin	Colorless Liquid (bp 82 C)	1	1	-	2	2	-	X	X	-	2	-	-	2	-	-			
Acetonitrile (Methyl Cyanide)	Colorless Liquid (bp 82 C)	1	1	2	1	2	X	2	2	2	2	-	2	1	-	1			
Acetophenone	Colorless Liquid (bp 202 C)	1	2	2	2	1	X	X	X	X	1	X	-	-	-	-			
Acetyl Chloride	Colorless Liquid (bp 51 C)	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-			
Acetyl Oxide (Acetic Anhydride)	Colorless Liquid (bp 140 C)	1	1	1	1	1	X	X	X	-	2	X	-	1	X	X			
Acetyl-P-Toluidiine (In Ether or Alcohols)	In Alcohol or Ether	1	1	1	1	1	-	X	X	-	2	X	-	1	-	-			
Acetylene	Gas	1	1	1	1	1	1	X	X	-	1	1	-	1	1	-			
Acetylene Dichloride (Dichloroethylene)	Colorless Liquid (bp 58-60 C)	1	X	X	X	X	-	X	X	-	X	1	-	X	1	X			
Acetylene Tetrachloride (Tetrachloroethane)	Colorless Liquid (bp 146 C)	1	X	X	X	X	-	X	X	-	X	1	-	X	1	X			
Acrolein (Hydroquinone Inhibited)	Colorless to Yellow Liquid	1	1	1	2	X	-	-	-	-	2	X	-	-	-	-			
Acrylamide	Colorless Crystals	1	1	2	2	-	-	-	-	-	-	1	-	-	-	-			
Acrylates (HEA or HPA)	Colorless Liquid	1	1	1	1	X	-	-	-	-	-	1	-	-	-	-			
Acrylic Acid	Colorless Liquid (bp 140 C)	1	1	1	1	-	-	-	-	-	-	1	-	-	-	-			
Acrylic Acid (Glacial 97%)	Colorless Liquid	1	1	1	1	X	-	-	-	-	-	1	-	1	X	-			
Acrylic Emulsion	Liquid	1	1	1	X	X	-	-	-	-	-	1	-	-	-	-			
Acrylonitrile	Colorless Liquid	1	2	1	1	X	X	2	2	X	X	X	X	1	-	1			
Adipic Acid	White Crystals	1	1	X	1	1	X	X	X	X	-	1	-	-	X	X			
Aeroshell 7A, 17 Grease	Liquid	1	-	-	-	-	1	-	-	2	-	-	-	-	-	-			
Air, 212 F	Colorless Gas	1	1	2	1	1	1	2	X	1	1	1	1	1	X	2			
Air, 257 F	Colorless Gas	1	1	X	1	1	X	X	X	2	1	1	1	1	X	X			
Air, 300 F	Colorless Gas	1	1	X	1	1	X	X	X	X	1	1	X	X	X	X			
Air, Ambient	Colorless Gas	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Aircraft Hyd. Oil AA	Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	-	-			
Alachlor (Lasso)	Colorless Crystals	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-			
Alkaline Liquid (NOS)	In Water Solutions	1	1	1	1	1	-	-	-	-	1	2	-	1	-	-			
Alkyaryl Polyether Alcohol		1	1	1	-	-	-	-	-	-	-	1	-	1	-	-			
Alkyd Resin (Thermosetting Polymer)	Varies	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-			
Alkylaryl Sulfonate (Alkylbenzene Sulfonate)	Powder	1	1	1	-	-	1	-	1	-	-	1	X	1	-	-			
Allomalaic Acid (Fumaric Acid) Solution	Liquid	1	1	-	-	2	1	2	2	-	-	1	-	-	-	X			
Allyl Alcohol	Colorless Liquid	1	1	-	-	-	-	-	-	-	-	1	-	-	X	X			
Allyl Bromide	Colorless to Yellow Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

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Chemical Name	Common Form	CAUTION: All ratings contained in this data are ment as guidelines ONLY! This does not warrant or guarantee any of the elastomers listed for any application. Testing under actual conditions is always recommended.  WARNING: The use of the wrong gasket, seal, or hose liner could lead to a leak, loss of products or emmissions to the environment.														
		Teflon	Gafron (XLPE)	Ultra High Molecular Polyethylene	Santoprene	Ethylene Propylene Diene (EPDM)	Nitrile / Buna-N / NBR	Styrene Butadiene	Natural Rubber	Neoprene	Butyl	Fluorocarbon	Hypalon	Chlorinated Polyethylene	Nylon	Polyvinyl Chloride
		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Allyl Chloride	Colorless Liquid	1	1	X	2	X	X	X	X	X	X	1	-	2	1	X
Alpha Methylstyrene	Colorless Liquid	1	2	2	X	X	X	X	X	X	X	1	-	X	1	X
Alpha Olefin Sulfonate	Powder	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Alpha Picoline	Colorless Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Alum (Aluminum Sulphate or Other)	White Crystals	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Alum, Potash (Aluminum Potassium Sulfate)	White Crystals	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Alumina - Calcined (Conveyed Pneumatically)	Granular	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Alumina Trihydrate (Conveyed Pnuematically)	White Crystalline Powder	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Aluminum Acetate	White Powder	1	1	-	-	-	-	1	1	-	-	-	-	-	-	-
Aluminum Alkyl (ie Triethylaluminum)	Colorless Liquid	X	X	X	X	X	X	X	X	X	X	1	X	X	X	X
Aluminum Bromide	White to Yellow Crystals	1	1	-	-	1	1	1	1	1	1	1	1	-	-	-
Aluminum Chloride Solution	White to Yellow Solution	1	1	X	1	1	1	1	1	-	1	1	-	1	-	-
Aluminum Chloride, Anhydrous	White to Yellow Crystals	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Aluminum Chlorohydrate Solution (Up to 50% )	White Solution	1	1	1	1	1	1	-	-	-	1	1	-	1	-	-
Aluminum Fluoride	White Crystals	1	1	-	-	-	-	1	1	-	-	-	-	-	-	1
Aluminum Formate (Di & Tri In Water)	In Hot Water	1	1	1	1	1	1	X	X	-	1	1	-	1	-	-
Aluminum Hydroxide (Alumina Trihydrate)	In Mineral Acid or Caustic Soda	1	1	1	1	-	X	X	X	1	1	1	-	1	X	X
Aluminum Nitrate	In Cold Water	1	1	1	1	1	1	1	1	1	1	1	1	1	-	1
Aluminum Phosphate Solution	In HCl or HNO3 (slightly soluble)	1	1	1	-	-	X	X	X	X	-	1	-	-	X	X
Aluminum Salts	Varies	1	1	-	-	1	1	1	1	1	1	-	1	-	-	1
Aluminum Sulfate	White Crystals	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Aluminum Sulfate Solution	In Water	1	1	1	1	1	1	1	1	-	1	1	-	1	-	-
Aluminum Sulfate Solution (49.7% H2O)	Liquid	1	1	1	1	1	1	1	1	1	1	1	-	1	1	1
Amines (A class of Organic Compounds)	Varies	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Amines (Aromatic - IE P-Toluidine)	White Plates (Solid)	1	1	-	2	-	-	1	-	-	-	-	-	-	-	-
Amines (Mixed)	Varies	1	1	-	1	2	2	2	2	2	2	X	-	-	-	-
Amines (Primary, Secondary, Tertiary, Etc)	Varies	1	1	-	1	-	-	-	-	-	-	X	-	-	-	-
Aminodiphenylamine	Purple Powder	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aminoethanol (Ethanolamine)	Colorless Viscous Liquid	1	1	1	1	-	-	-	-	-	1	X	-	1	1	-
Aminoethylethanolamine	Liquid	1	1	1	2	2	-	-	-	-	1	-	-	1	1	-
Ammonia (Anhydrous)	Gas, liquid @ 280 PSI @<120 F	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia (Aqueous up to 30% NH3)	Colorless Liquid	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1
Ammonia Liquor	Colorless Liquid	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Ammoniated Fatty Acid (ie Ammonium Caprylate)	Liquid above 75 C	1	1	1	-	-	-	-	-	-	-	1	-	-	-	-
Ammonium Acetate	In Water	1	1	1	1	1	1	1	1	2	1	1	-	1	2	1
Ammonium Bicarbonate	White Crystals	1	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Ammonium Bisulfate (50%)	Colorless Liquid	1	1	1	1	1	-	-	-	-	1	1	-	1	-	-
Ammonium Carbonate	Colorless to White Powder	1	1	-	-	-	X	-	1	2	-	-	-	-	-	1
Ammonium Chloride	White Crystals	1	-	X	-	-	-	1	-	-	-	-	-	-	-	-
Ammonium Chloride Solution	Liquid	1	1	-	-	1	2	1	1	X	1	-	1	1	X	1
Ammonium Flouride	White Crystals	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Ammonium Hydroxide (16%, 20%, 26%, & 30%)	Colorless Liquid	1	1	1	1	-	-	-	-	-	-	2	-	-	-	-
Ammonium Hydroxide (up to 30% NH3)	Colorless Liquid	1	1	1	1	1	2	2	2	2	2	2	1	1	X	X
Ammonium Metaphosphate	White powder	1	1	-	-	1	2	2	2	2	1	-	2	-	-	2
Ammonium Nitrate	Colorless Crystals	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-

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		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
		Teflon	Gatron (XLPE)	Ultra High Molecular Polyethylene	Santoprene	Ethylene Propylene Diene (EPDM)	Nitrile / Buna-N / NBR	Styrene Butadiene	Natural Rubber	Neoprene	Butyl	Fluorocarbon	Hypalon	Chlorinated Polyethylene	Nylon	Polyvinyl Chloride
Ammonium Nitrate Fertilizer (20.5% N, or 33.5% N)	Aggregate	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Ammonium Nitrate Prills and Oil	Aggregate	1	-	-	-	-	1	-	1	-	-	-	-	-	-	-
Ammonium Nitrate Solution (up to 83%)	Liquid	1	1	1	1	-	-	1	-	-	1	-	1	-	-	-
Ammonium Nitrite	Colorless crystal	1	1	-	-	-	X	X	X	2	-	-	-	1	-	-
Ammonium Persulfate	Solution in Water	1	1	-	-	-	X	-	-	X	-	X	-	-	-	-
Ammonium Phosphate	White Crystals or Powder	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Ammonium Phosphate Solutions	Liquid	1	1	1	1	1	1	1	1	1	1	1	1	1	-	1
Ammonium Polysulfide Solution	Yellow Solution	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Ammonium Sulfate	Gray to White Crystals	1	1	-	-	-	-	1	-	-	-	-	1	-	-	-
Ammonium Sulfide	Yellow Crystals	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Ammonium Sulfide Solution (40-44% or less)	Liquid	1	1	-	-	1	2	1	1	-	1	1	1	1	-	1
Ammonium Thiocyanate (50-60% or less)	In Water	1	1	1	1	1	1	1	1	1	-	1	1	1	-	-
Amyl Acetate (Banana or Pearl Oil)	Colorless Liquid	1	1	1	-	2	X	X	X	X	2	X	X	X	1	X
Amyl Alcohol	Colorless Liquid	1	1	1	1	2	2	2	2	2	2	1	2	1	1	1
Amyl Chloride (Chloropentane)	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	X
Amyl Chlorides (mixed)	Straw to Purple Liquid	1	2	2	X	X	X	X	X	X	X	1	X	2	1	X
Amyl Chloronaphthalene		1	1	2	X	X	X	X	X	X	X	1	X	X	1	-
Amyl Naphthalene		1	1	-	-	X	X	X	X	X	X	1	X	X	-	-
Amyl Phenol	Clear Straw Colored Liquid	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Amylamine	Colorless Liquid	1	-	-	-	X	2	-	X	X	X	X	X	-	-	-
Amylbenzene (sec amylbenzene)	Clear Liquid	1	2	2	X	X	2	X	X	2	X	1	-	-	-	-
Anethole (anise camphor)	White Crystals, Liquid >23 C	1	2	-	-	-	X	X	X	X	X	1	X	X	X	-
Anhydrous Ammonia	Gas, Liquid @ 280 Psi<120 F	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Aniline	Colorless Oily Liquid	1	2	X	1	2	X	X	X	X	2	1	X	2	X	-
Aniline Dyes		1	1	-	1	2	X	X	X	X	2	2	X	2	-	-
Aniline Hydrochloride	White Crystals	1	1	-	-	2	2	2	2	X	2	-	-	-	-	-
Aniline Oil (Aniline)	Colorless Oily Liquid	1	2	-	1	2	X	X	X	-	2	1	X	2	-	-
Animal Fat (Lard)	Soft White Solid, Liquid >42 C	1	1	-	-1	X	1	X	X	2	X	1	2	1	1	-
Animal Gelatin		1	-	1	-	-	1	-	-	1	-	-	-	-	-	1
Animal Grease, Inedible, Liquid	Liquid	1	-	-	-	X	1	-	X	2	X	1	2	-	-	-
Animal Oils	Solid to Liquid	1	-	-	2	-	1	-	-	2	-	-	-	1	1	1
Ant Oil (Furfural)	Colorless to Reddish Brown Liquid	1	1	-	2	X	X	X	X	2	X	2	2	1	-	X
Antifreeze (Glycol Base)	Liquid	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1
Antimony Chloride (50%)	White Powder	1	1	1	-	-	-	-	-	-	2	1	-	-	1	1
Antimony Pentachloride	Reddish-yellow Liquid	1	1	1	-	-	-	-	-	-	-	1	-	-	-	-
Antimony Salts	White Crystal	1	1	-	-	1	2	-	-	-	1	1	-	-	-	1
Aqua Ammonia (Ammonium Hydroxide)	Colorless Liquid	1	1	1	1	-	-	-	-	-	-	2	-	-	-	-
Aqua Regia (Nitrohydrochloric Acid)	Fuming Yellow Liquid	1	2	X	X	X	X	X	X	X	X	1	X	2	X	X
Argon, Compressed	Colorless Gas	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Aromatic Hydrocarbons	Typically Colorless Liquids	1	2	2	2	X	2	X	X	X	X	1	X	X	1	X
Arsenic Acid	In Water	1	1	1	2	2	-	X	X	-	2	1	-	1	-	-
Arsenic Trioxide	In Acid	1	1	1	2	X	2	X	X	2	X	1	X	-	-	1
Askarel (Transformer Oil)	Varies	1	2	2	-	X	X	X	X	X	X	1	X	-	1	X
Asphalt	Varies	1	2	X	0	X	2	X	X	-	X	1	-	-	X	X
Asphalt (Blown)	Black Solid	-	-	X	-	-	-	-	1	-	-	-	-	-	-	-

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		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Asphalt (Cut Back)	Black Liquid	1	X	X	X	X	2	X	X	2	X	1	X	X	2	X
Asphalt Emulsion	Black Liquid	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
Asphalt Paint	Black Liquid	1	2	X	X	X	2	X	X	-	X	1	X	-	2	X
Asphaltene	In Carbon Disulfide	1	2	X	X	X	2	X	X	2	X	1	X	X	1	-
ASTM Oil No. 1	Brown Liquid	1	1	1	2	X	1	X	X	1	X	1	2	1	1	2
ASTM Oil No. 2	Brown Liquid	1	1	1	X	X	1	X	X	2	X	1	2	1	1	X
ASTM Oil No. 3	Brown Liquid	1	1	1	X	X	1	X	X	X	X	1	X	1	1	X
ASTM Reference Fuel A	Liquid	1	1	1	2	X	1	X	X	1	X	1	1	1	1	2
ASTM Reference Fuel B	Liquid	1	2	1	X	X	1	X	X	2	X	1	X	2	1	X
ASTM Reference Fuel C	Liquid	1	2	2	X	X	2	X	X	X	X	1	X	2	1	X
ATF (Automatic Transmission Oil)	Liquid	1	1	1	X	X	1	-	-	-	X	1	-	1	-	-
Azelaic Acid (Heptanedicarboxylic Acid)	Yellowish to White Powder	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-
<b>B</b>																
Baltic Types 100, 150, 200, 300, 500	Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	-	2
Banvel (Ag Spray, Concentrated)	Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	1	-
Bardol B	Dark colored Liquid	1	1	-	-	X	X	X	X	X	X	2	X	-	-	-
Barite (Natural Barium Sulfate)	White to Yellowish Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Barium Carbonate	White Powder	1	1	-	-	X	1	X	1	1	X	1	X	X	-	1
Barium Chloride	Colorless Crystals	1	1	1	1	1	1	1	1	1	1	1	1	1	X	1
Barium Hydroxide	White Powder	1	1	-	-	-	1	X	1	1	1	-	1	1	-	X
Barium Sulfate	White to Yellowish Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Barium Sulfide	Yellowish Green to Gray Powder	1	1	1	-	-	-	-	1	-	-	1	-	-	-	-
Basic Copper Arsenate	Blue to Green Powder	1	1	-	-	-	-	2	1	-	-	1	2	-	-	1
BBP (Butyl Benzyl Phthalate)	Clear Oily Liquid	1	-	-	-	-	X	-	X	-	1	X	X	-	-	-
Beer	Yellow Liquid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beet Sugar Liquors	Colorless Solution	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Bellows 80-20 Hydraulic Oil	Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	-	2
Benzaldehyde (Benzoic Aldehyde)	Colorless to Yellow Liquid	1	1	1	2	2	X	X	X	X	2	X	X	2	2	X
Benzene (Benzol)	Colorless to Yellow Liquid	1	2	X	X	X	X	X	X	X	X	1	X	X	1	X
Benzenesulfonic Acid	Liquid above 66 C	1	1	1	-	-	-	X	X	X	2	1	2	-	-	X
Benzidine	Paste	1	2	-	-	X	2	X	1	X	X	-	-	-	-	X
Benzoic Acid	White Crystals (mp 121 C)	1	1	1	1	2	X	X	X	X	2	1	2	1	-	X
Benzoic Aldehyde (Benzaldehyde)	Colorless to Yellow Liquid	1	1	1	2	2	X	X	X	X	2	X	X	2	2	X
Benzol (Benzene)	Colorless to Yellow Liquid	1	2	2	X	X	X	X	X	X	X	1	X	X	1	X
Benzophenone	White Powder	1	1	-	-	-	-	-	1	-	-	1	-	-	-	-
Benzotrchloride	Colorless to Yellow Liquid	1	-	-	X	X	X	X	X	X	X	1	-	X	2	X
Benzyl Acetate	Water White Liquid	1	2	2	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Alcohol	Water White Liquid	1	1	1	1	2	X	X	X	X	1	1	X	1	X	1
Benzyl Alcohol, Photo Inhibited	Water White Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Benzoate	Water White Liquid	1	1	-	-	2	-	-	-	-	2	1	-	-	-	-
Benzyl Chloride	Colorless Liquid	1	2	2	2	X	X	X	X	X	X	1	-	X	2	X
Bicarbonate Of Soda	White Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Bismuth Carbonate	White Powder	1	-	-	-	-	-	-	1	X	-	-	-	-	-	-
Bisphenol A	White Flakes	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-

# Fluid Resistance Data For Common Gasket And Seal Elastomers

**Rating Legend: 1 = Excellent , 2 = Good , X = NOT RECOMMENDED , - = Insufficient Information**

Chemical Name	Common Form	CAUTION: All ratings contained in this data are ment as guidelines ONLY! This does not warrant or guarantee any of the elastomers listed for any application. Testing under actual conditions is always recommended. WARNING: The use of the wrong gasket, seal, or hose liner could lead to a leak, loss of products or emmissions to the environment.														
		Teflon	Gafron (XLPE)	Ultra High Molecular Polyethylene	Santoprene	Ethylene Propylene Diene (EPDM)	Nitrile / Buna-N / NBR	Styrene Butadiene	Natural Rubber	Neoprene	Butyl	Fluorocarbon	Hypalon	Chlorinated Polyethylene	Nylon	Polyvinyl Chloride
		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Bitumastic	Liquid	1	-	X	-	X	2	X	X	2	X	2	X	2	-	-
Black Liquor (RXN Product Pulpwood+NaOH)	Black Alkaline Liquid	1	1	1	1	2	2	X	X	-	2	1	2	2	-	-
Black Sulfate Liquor (See "Black Liquor")	Black Alkaline Liquid	1	1	1	1	2	2	X	X	2	2	1	2	2	-	1
Blast Furnace Gas (Cooled)	Gas	1	1	-	-	-	X	X	X	X	X	1	X	-	-	X
Bleach (Chlorinated Lime)	White Powder (35-37% Cl)	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Bleach Liquor (Calcium Hypochlorite/H2O)	Clear Solution	1	1	1	1	2	-	-	-	-	-	1	-	1	-	-
Borax (Sodium Borate)	White Crystals	1	1	-	-	-	-	1	-	-	1	-	-	-	-	-
Bordeaux Mixture (Slaked Lime &Copper Sulfate)	In Water	1	1	1	1	1	1	2	2	2	1	1	-	-	-	1
Boric Acid	White Powder or Colorless Scale	1	1	1	1	1	1	1	1	1	1	1	1	1	X	1
Boric Oxide	Colorless Powder	1	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Brake Fluid (Petroleum Base)	Liquid	1	1	-	X	X	1	X	X	2	X	1	X	1	1	2
Brake Fluid (Synthetic Base)	Liquid	1	1	-	1	1	X	X	X	X	1	X	X	1	-	2
Brine (Salt)	Liquid	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Bromine	Dark Reddish Brown Liquid	1	-	-	X	X	X	-	-	X	-	1	-	-	X	X
Bromobenzene	Colorless Liquid	1	-	-	X	X	-	X	X	-	X	1	-	-	-	X
Bromochloroethane	Colorless Liquid	-	-	X	X	X	-	X	X	-	X	X	-	X	X	-
Bromochloromethane (Chlorobromomethane)	Clear Liquid	1	2	X	X	X	X	X	X	X	X	X	X	X	X	X
Bromotoluene	Clear Liquid	1	-	-	X	X	-	X	X	-	X	1	-	X	-	X
Bubble Bath Compounds	Liquid	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Bunker Oil	Liquid	1	2	2	X	X	1	X	X	2	X	1	X	-	1	X
Butadiene (1,3)	Gas, Liquid @ 82 PSIG and 120 F	1	1	-	X	X	2	X	X	X	X	1	X	-	1	X
Butanal (Butyraldehyde)	Water White Liquid	1	-	-	-	2	X	-	-	X	-	X	X	-	-	-
Butandiol (Butylene Glycol)	Colorless Oily Liquid	1	1	2	-	-	-	-	-	-	-	1	-	-	X	-
Butane (Gas)	Colorless Gas	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-
Butane (Liquid)	Liquid @75 PSIG @ 120 F	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-
Butanol (Butyl Alcohol)	Colorless Liquid	1	1	1	1	1	1	1	1	2	1	1	2	1	1	1
Butter	Yellow to white semi-Solid to Liquid	-	-	-	2	-	-	-	-	-	-	-	-	2	-	-
Butter Oil (Use FDA Hose)	Yellow to white Liquid	1	-	-	2	-	-	X	X	2	-	-	-	-	-	-
Butyric Acid	Colorless Liquid (bp 163 C)	1	1	1	1	2	-	2	2	X	2	1	X	1	X	-
Butyl Carbitol (Diethylene Glycol Butyl Ether)	Colorless Liquid	1	1	-	-	2	2	X	X	2	2	1	-	1	-	-
Butyl Cellosolve (EG Monobutyl Ether)	Colorless Liquid	1	1	-	1	1	-	-	-	-	-	-	-	1	-	1
Butyl "Oxitol" TM for EG Monobutyl Ether	Colorless Liquid	1	1	-	1	1	-	-	-	-	-	-	-	1	-	1
Butyl Acetate	Colorless Liquid	1	2	2	1	X	X	X	X	X	2	X	X	2	1	1
Butyl Acrylate	Colorless Liquid	1	2	-	2	-	-	-	-	-	-	X	-	-	-	-
Butyl Alcohol (Butanol)	Colorless Liquid	1	1	1	1	1	1	1	1	2	1	1	2	1	1	1
Butyl Aldehyde	Water White Liquid	1	-	-	-	2	X	-	-	X	-	X	X	-	-	-
Butyl Benzyl Phthalate (BBP)	Clear Oily Liquid	1	-	-	-	-	X	-	X	-	1	X	X	-	-	-
Butyl Chloride	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Butyl Ether	Colorless Liquid	1	1	-	-	-	2	X	X	2	2	X	-	1	-	-
Butyl Ethyl Ether (Ethyl-n-Butyl Ether)	Liquid	1	-	-	-	-	2	-	X	-	X	-	2	-	-	-
Butyl Formate	Colorless Liquid	1	-	-	-	-	X	-	X	X	-	-	-	-	-	-
Butyl Mercaptan (2-Methyl-2-Butanathiol)	Liquid	1	1	-	-	X	-	X	X	-	X	1	-	-	-	X
Butyl Methacrylate	Colorless Liquid	1	-	-	2	-	-	-	-	-	-	-	-	-	-	-
Butyl Stearate	Colorless Liquid	1	1	-	-	X	2	X	X	X	X	1	-	2	-	1
Butylamine	Colorless Liquid	1	1	-	-	-	X	X	X	X	X	X	X	2	-	-

# Fluid Resistance Data For Common Gasket And Seal Elastomers

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Chemical Name	Common Form	CAUTION: All ratings contained in this data are ment as guidelines ONLY! This does not warrant or guarantee any of the elastomers listed for any application. Testing under actual conditions is always recommended. WARNING: The use of the wrong gasket, seal, or hose liner could lead to a leak, loss of products or emmissions to the environment.														
		TF	GA	UM/HW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Butylene Glycol (Butandiol)	Colorless Oily Liquid	1	1	2	-	-	-	-	-	-	1	-	-	X	-	
Butyraldehyde (Butanal)	Water White Liquid	1	2	-	-	X	X	X	X	2	X	X	X	2	-	
Butyric Acid	Colorless Liquid	1	1	1	1	1	-	-	-	-	1	1	X	1	1	
Butyric Anhydride	Water White Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>C</b>																
Cadmium Acetate (Soluble in H2O & Alcohols)	In Water or Alcohol	1	-	-	-	-	X	-	X	-	1	X	-	-	-	
Cake Alum (Aluminum Sulfate)	White Crystals	1	1	-	-	1	1	-	1	1	-	-	-	-	-	
Cake Alum Solution (Al Sulphate up to 50%)	In Water	1	1	1	1	1	1	-	-	-	1	1	-	1	1	
Calcine Liquor (Radioactive Waste)	In Water Solution	1	1	-	-	1	1	-	-	-	1	1	-	-	-	
Calcium Acetate	Powder	1	1	-	-	1	X	2	2	X	1	X	X	1	-	
Calcium Aluminate (Soluble in Acids)	In Acid	1	-	-	-	-	1	-	1	1	1	1	1	-	-	
Calcium Aluminate (Tricalcium Aluminate)	Crystals or Powder	1	-	-	-	-	-	-	1	-	-	-	-	-	-	
Calcium Arsenate	In Dilute Acid	1	1	-	-	-	-	-	-	-	-	1	-	-	1	
Calcium Bisulfide (Calcium Hydrosulfide)	In Alcohol or Water	1	1	-	-	-	1	2	2	1	1	1	1	1	2	
Calcium Bisulfite (Calcium Hydrogen Sulfite)	Yellow Liquid	1	1	-	-	-	1	2	2	1	1	1	1	1	1	
Calcium Bromide Solution	In Water or Alcohol	1	1	1	1	-	-	-	-	-	-	1	-	-	-	
Calcium Carbonate	Solid White Powder	1	1	-	-	1	1	1	1	1	1	1	1	1	1	
Calcium Carbonate Slurry	Solid in H2O	1	-	-	-	1	1	1	1	1	1	1	1	-	-	
Calcium Chlorate	In Water or Alcohol	1	1	-	-	2	1	2	2	1	2	-	1	-	1	
Calcium Chloride, Dry	White solid	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
Calcium Chloride, Liquid (Not For Food)	In Water or Alcohol	1	1	-	1	1	1	1	1	1	1	1	1	1	X	
Calcium Chloride, Liquid, Food Grade 33%	In Water	1	-	-	-	1	1	1	1	1	1	1	1	1	1	
Calcium Hydrogen Sulfite (Calcium Bisulfite)	Yellow Liquid	1	1	-	-	-	1	2	2	1	1	1	1	1	-	
Calcium Hydrosulfide (Calcium Bisulfide)	In Alcohol or Water	1	1	-	-	-	1	2	2	1	1	1	1	1	2	
Calcium Hydroxide (Hydrated or Slaked Lime)	Solid White Powder	1	1	-	1	-	2	1	1	1	1	X	1	1	X	
Calcium Hydroxide Solutions	In Glycerol or Acids	1	1	X	-	-	2	-	-	-	-	-	-	X	-	
Calcium Hypochlorite	Solid White Crystals	1	1	X	1	-	-	X	X	X	2	-	2	1	X	
Calcium Hypochlorite Solutions	In Water or Alcohol	1	1	-	-	-	-	X	X	X	2	-	2	1	-	
Calcium Metasilicate (Calcium Silicate)	White Powder	1	1	-	-	-	2	2	1	-	2	1	2	1	-	
Calcium Nitrate Solutions	In Water, Alcohol, or Acetone	1	1	-	-	1	1	1	1	1	1	1	1	1	-	
Calcium Oxide (Lime; quick,unslaked)	White to Gray Lumps	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
Calcium Silicate (Calcium Metasilicate)	White Powder	1	1	-	-	-	2	2	1	-	2	1	2	1	-	
Calcium Stearate	White Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
Calcium Sulfate	White Powder or Crystals	1	1	-	-	1	1	-	1	1	1	1	1	1	-	
Calcium Sulfide	Yellow to Gray Powder	1	1	-	-	-	1	2	1	2	1	2	1	1	2	
Calcium Sulfite (Soluble In Sulfurous Acid)	In Acid	1	1	1	1	1	-	-	-	-	X	1	-	1	-	
Caliche Liquors (Sodium Nitrate)	In Water	1	1	-	-	-	1	2	2	-	1	-	1	-	-	
Camphene (Liquid above 46 C, 115 F)	Liquid above 46 C	1	-	-	-	X	-	-	-	-	-	1	X	-	-	
Cane Sugar Liquors	In Water	1	1	-	1	2	1	2	2	1	2	-	1	1	-	
Caproic Acid	Colorless or Yellow Liquid	1	1	1	1	2	-	-	-	-	-	1	-	-	-	
Caprolactam	White Flakes	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
Caprolactam, Molten (above 69 C)	Liquid	-	-	-	-	-	-	-	-	-	-	-	-	X	-	
Caprylic Acid (Octanoic Acid)	Colorless, Oily Liquid	1	-	-	-	-	-	-	-	-	-	-	-	1	-	
Carbamates	Crystals	1	1	-	-	X	X	X	X	X	X	2	X	-	-	

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		TF	GA	UM/HR	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Carbolic Acid	Liquid above 43 C	1	2	2	2	2	X	X	X	X	2	1	X	1	X	X
Carbolic Acid (Phenol)	White or Pink Crystals	1	2	-	2	2	X	X	X	X	2	1	X	1	X	X
Carbolic Acid (Phenol, 82-95% in Creosols)	Liquid	1	2	-	-	2	X	X	X	X	2	2	X	1	X	X
Carbon Dioxide (Dry)	Gas	1	1	-	-	1	1	1	1	1	1	1	1	-	-	1
Carbon Dioxide (Wet)	Gas with Water Vapor	1	1	1	-	2	1	2	2	1	2	1	1	-	-	1
Carbon Disulfide	Clear to Faint Yellow Liquid	1	2	1	-	X	2	X	X	X	X	1	X	2	1	X
Carbon Monoxide	Gas	1	2	1	-	1	2	X	X	2	X	1	1	-	-	1
Carbon Tetrachloride (Pyrene)	Colorless Liquid	1	2	X	X	X	X	X	X	X	X	1	X	2	1	X
Carbonic Acid	Liquid	1	1	1	1	1	1	1	1	1	1	1	1	1	-	X
Carbonyl Chloride (Phosgene)	Gas, Liquid @ 60 PSI @ 120 F	1	X	X	X	X	X	X	X	X	1	1	X	-	2	-
Casein (White amorphous solid)	In Concentrated Acid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	1
Castor Oil	Pale Yellow or Colorless Liquid	1	1	-	-	-	1	X	X	1	2	1	1	1	-	1
Caustic Potash, Dry (Potassium Hydroxide)	White pellets or flakes	1	1	-	1	2	X	2	1	2	1	1	1	1	X	X
Caustic Potash, Liquid (up to 45%)	Solution in Water	1	1	1	1	2	2	2	2	-	1	1	-	1	1	1
Caustic Soda, Dry (Sodium Hydroxide)	White beads or pellets	-	1	-	1	-	-	-	1	-	-	-	-	-	-	-
Caustic Soda, Liquid (up to 73%)	Solution in Water	1	2	-	1	2	X	1	1	2	2	X	1	1	2	X
Cellosolve Acetate (Eg Ethyl Ether Acetate)	Colorless Liquid	1	1	-	1	2	X	-	-	-	-	X	-	1	-	1
Cellosolve Butyl (Eg Butyl Ether)	Colorless Liquid	1	1	-	1	2	X	-	-	-	-	X	-	1	-	1
Cellulose	Solid, many forms	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-
Cement, Portland	Gray Powder	1	-	1	-	-	-	-	1	-	-	-	-	-	-	-
China-Wood Oil (Tung Oil)	Yellow Oil	1	1	-	-	X	1	X	X	X	X	1	1	-	-	2
Chlordane	Colorless Viscous Liquid	1	1	-	-	X	X	-	-	X	-	1	X	-	1	2
Chlorinated Napthalene (Chloronapthalene)	Oily Liquid to Solid	1	-	-	-	X	X	X	X	X	X	1	X	-	-	-
Chlorinated Solvents (ie Tetrchloroethane)	Colorless Liquid	1	2	-	-	X	-	X	X	-	X	1	X	X	-	X
Chlorine	Gas - GreenishYellow	1	-	1	-	-	-	-	-	-	-	1	-	-	X	X
Chlorine Liquid (Liquid @ 210 PSIG @ 120 F)	Clear Amber @ 210 PSIG, 49 C	1	-	-	-	-	-	-	-	-	-	1	-	-	X	X
Chlorine Trifluoride (Liquid @ 150 PSIG)	Pale Green Liquid	1	-	-	-	X	-	-	-	-	-	1	-	-	-	X
Chlorine Water (0.4% Chlorine)	Clear, yellowish Liquid	1	1	1	-	-	-	-	-	-	-	1	-	-	-	-
Chloroacetic Acid	Powder or Crystals	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroacetic Acid (Under 100 deg F)	Liquid above 63 C	1	1	1	-	X	X	X	X	2	X	1	2	-	-	-
Chloroacetic Acid Solution	In Water, Alcohol, Ether	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroacetone	Colorless Liquid	-	-	-	-	1	-	-	-	-	-	X	-	-	-	-
Chloroacetyl Chloride	Water White Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Chloroaniline	Amber Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene (Phenyl Chloride)	Clear Liquid	1	2	-	-	X	X	X	X	X	X	1	X	X	X	X
Chlorobromomethane (Bromochloromethane)	Clear Liquid	1	2	X	-	X	X	X	X	X	X	X	X	-	2	X
Chlorodifluoromethane (Freon 22)	Gas (Liquid @ 150 PSIG, 120 F)	1	-	-	2	1	X	1	-	1	X	1	1	X	1	-
Chloroethane (Ethylene Dichloride)	Colorless Liquid	1	2	2	2	-	X	X	X	-	X	1	X	X	2	X
Chloroform	Colorless Liquid	1	2	2	X	X	X	X	X	X	X	1	X	X	2	X
Chloronapthalene (Chlorinated Napthalene)	Oily Liquid to Solid	1	-	-	-	X	X	X	X	X	X	1	X	-	-	-
Chloropentane (n-amyl chloride)	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	X
Chlorophenol	In Benzene, Alcohol, Ether	1	2	-	2	-	-	-	-	-	-	-	-	-	-	-
Chloropicrin Mixture	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	X
Chloropropylene Oxide (Epichlorohydrin)	Volatile Liquid (bp 239 F)	1	2	-	X	X	-	-	-	-	-	X	-	-	-	-
Chlorosulfonic Acid	Colorless to Light Yellow Liquid	1	X	-	-	X	X	X	X	X	-	1	X	-	X	X

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		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Chlorothene (TM for chlorinated solvents)	Colorless Liquid	1	1	X	-	-	X	-	-	X	-	2	-	-	-	
Chlorotoluene	Colorless Liquid	1	-	-	-	X	X	X	X	X	X	1	X	X	-	X
Chlorox	Colorless Liquid	1	1	1	1	-	-	2	2	2	2	-	2	1	1	1
Chocolate Syrup	Liquid	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1
Chrome Alum (Chromium Potassium Sulfate)	In Water	1	1	-	-	1	1	1	1	1	1	1	1	-	1	1
Chromic Acid (100%)	Dark Red Crystals	1	X	2	-	-	-	-	-	-	-	1	-	-	-	X
Chromic Acid (25% Solution or less)	In Water	1	1	1	1	2	X	X	X	X	X	1	2	1	X	X
Chromic Acid (50% Solution with water)	In Water	1	2	1	1	2	X	X	X	X	X	1	2	1	X	X
Chromic Acid (Chromium Trioxide)	Purplish-Red Crystals	1	X	2	-	-	-	-	-	-	-	1	-	-	-	X
Chromic Chloride	In Water	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Chromium Trioxide (Chromic Acid)	Purplish-Red Crystals	1	-	2	-	-	-	-	-	-	-	1	-	-	-	X
Cider	Liquid	1	-	-	1	-	-	-	-	-	-	-	-	-	-	2
Cinene (Dipentene)	Colorless Liquid (bp 347 F)	1	2	-	X	X	X	X	X	-	-	1	-	-	-	-
Citgo FR Fuels	Liquid	1	1	-	-	1	X	-	-	-	1	-	-	-	-	2
Citric Acid Solution	In Water	1	1	1	1	2	X	2	2	1	2	1	1	-	X	1
Coal Gas (Coke Oven Gas, Max 120 deg F)	Gas	1	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Coal Tar	Black, viscous Liquid	1	-	-	X	X	2	X	X	2	X	1	X	2	X	X
Coal Tar Pitch (Roofing,100 C Melting Temp)	Liquid above 100 C	1	-	-	X	X	2	X	X	2	X	1	2	2	-	X
Cobalt Nickel Plating Solution	Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	X	-
Cocoa Butter (Theobromo Oil)	Liquid above 95 F	1	1	2	2	-	2	X	X	2	-	-	-	-	-	-
Coconut Oil	Liquid above 77 F	1	-	-	2	2	1	X	X	1	2	1	2	-	1	2
Cod Liver Oil	Pale Yellow Liquid	1	1	-	2	2	X	X	X	X	2	1	X	-	-	-
Coke Oven Gas (300 F or less)	Gas	1	1	-	-	X	X	X	X	X	X	1	2	-	-	-
Copper Arsenate (Cupric Arsenate)	In Dilute Acid	1	1	-	-	-	-	2	2	-	-	1	2	-	-	-
Copper Chloride (Cupric Chloride)	In Water	1	1	-	-	-	2	2	2	2	2	1	2	2	X	1
Copper Cyanide (Cupric Cyanide)	In Dilute Acids or Alkalies	1	1	-	-	2	2	2	2	2	2	1	2	-	-	1
Copper Nitrate (Cupric Nitrate)	In Water	1	1	-	-	1	1	2	2	1	1	1	1	1	-	1
Copper Sulfate (Cupric Sulfate)	In Water	1	1	-	-	1	1	2	2	1	2	1	1	1	-	1
Copper Sulfide (Soluble in Nitric Acid)	In Ntric Acid	1	-	-	-	-	1	-	X	-	1	1	1	-	-	-
Corn Oil	Pale Yellow Liquid	1	1	-	2	2	2	X	X	2	2	1	X	2	-	1
Corn Syrup (Glucose Syrup)	Clear Liquid	1	2	-	1	2	2	2	2	2	2	2	2	-	-	-
Cottonseed Oil	Liquid, several colors	1	1	-	2	2	2	-	-	1	-	1	2	2	-	-
Creosote (high Napthalene/Anthracene)	Liquid	X	2	X	-	-	2	X	X	X	2	1	X	-	-	X
Cresol (Methyl Phenol)	Liquid above 95 F	1	2	-	-	-	X	X	X	X	2	1	X	1	X	-
Cresylic Acid	Liquid	1	-	-	-	X	X	X	X	X	X	1	X	-	X	-
Crotonic Acid (Methylacrylic Acid)	White Crystalline Solid	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Crude Oil (Crude Petroleum Oil)	Liquid	1	1	-	X	X	1	X	X	2	X	1	2	2	-	1
Crude Wax	Liquid above 200 F	1	2	-	-	-	2	-	-	-	2	1	-	-	-	1
Cryolite (Greeland Spar)	In Sulfuric Acid	1	2	-	-	X	1	X	X	2	X	1	X	-	-	-
Cumene (Isopropyl Benzene)	Colorless Liquid	1	2	-	X	-	-	-	-	-	-	1	-	2	-	-
Cupric Arsenate (Copper Arsenate)	In Dilute Acid	1	1	-	-	-	-	2	2	-	-	1	2	-	-	-
Cupric Chloride (Copper Chloride)	In Water	1	1	-	-	-	2	2	2	2	2	1	2	2	X	1
Cupric Cyanide (Copper Cyanide)	In Dilute Acids or Alkalies	1	1	-	-	2	2	2	2	2	2	1	2	-	-	1
Cupric Nitrate (Copper Nitrate)	In Water	1	1	-	-	1	1	2	2	1	1	1	1	1	-	1
Cupric Sulfate (Copper Sulfate)	In Water	1	1	-	-	2	1	2	2	1	2	1	1	1	X	1



# Fluid Resistance Data For Common Gasket And Seal Elastomers

Rating Legend: 1 = Excellent , 2 = Good , X = NOT RECOMMENDED , - = Insufficient Information

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		TF	GA	UM/HW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Cutting Oil (Mineral Oil Base)	Liquid	1	2	-	-	X	1	X	X	2	X	1	X	-	-	-
Cutting Oil, Sulfur Base	Liquid	2	-	-	-	-	1	-	-	X	-	-	-	-	-	-
Cutting Oil, Water Soluble	Liquid	1	-	-	-	-	1	-	-	X	-	-	-	-	-	-
Cyanide, Copper (Cupric Cyanide)	In Dilute Acids or Alkalies	1	1	-	-	2	2	2	2	2	2	1	2	-	-	1
Cyanide, Mercuric	In Water	1	1	-	-	2	2	2	2	1	2	-	1	-	-	-
Cyanide, Potassium	In Water	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Cyanide, Silver	In Nitric Acid	1	1	-	-	-	-	-	1	-	-	-	-	-	-	1
Cyanide, Sodium	In Water	1	1	-	-	1	1	1	1	1	1	1	1	1	1	1
Cyclohexane	Colorless Liquid	1	1	1	-	X	2	X	X	X	X	1	X	1	-	X
Cyclohexanol	Colorless, oily Liquid	1	2	-	-	X	2	X	X	2	X	1	2	1	-	X
Cyclohexanone	Colorless to yellow Liquid	1	1	-	-	X	X	X	X	X	X	X	X	2	-	X
Cyclohexylamine	Colorless Liquid	-	-	-	-	1	-	X	-	-	1	X	-	-	-	-
Cyclopentane	Colorless Liquid	1	-	-	-	X	2	-	X	2	X	1	X	-	-	-
Cyclopentanol	Colorless Liquid	1	-	-	-	-	2	-	X	-	X	2	X	-	-	-
Cyclopentanone	Water white Liquid	-	-	-	-	-	X	-	X	-	X	X	X	-	-	-
Cymene	Colorless Liquids	1	2	-	-	X	X	X	X	X	X	2	X	2	-	X
Cymene (Isopropyltoluene)	Colorless Liquid	1	-	-	-	-	-	-	-	-	1	-	-	1	-	-
<b>D</b>																
Decalin (TM for decahydronaphthalene)	Colorless Liquid	1	2	2	X	X	2	X	X	-	X	1	X	2	1	-
Decanal (Decyl Aldehyde)	Colorless to yellow Liquid	1	-	-	-	-	X	-	X	-	X	X	X	-	-	-
Decanol (Decyl Alcohol)	Colorless, water white Liquid	1	-	-	-	-	1	-	X	X	X	2	2	-	-	X
Decyl Aldehyde (n-decanal)	Colorless to yellow Liquid	1	-	-	-	-	X	-	X	-	X	X	X	-	-	-
Deicing Fluid (ethylene or propylene glycol)	Orange Liquid	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Denatured Alcohol	Colorless Liquid	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Detergent Sol. (Sodium dodcylbenzenesulfonate)	In Water	1	2	1	1	1	1	X	X	2	1	-	1	-	-	1
Developing Solutions (Hypos)	Liquid	1	1	-	-	-	-	2	2	2	2	-	2	-	-	1
Dexron	Brown Liquid	1	X	-	-	X	1	-	-	-	X	-	-	1	1	2
Dextrin (Starch gum)	Yellow or White Powder	1	1	-	-	1	1	-	-	1	X	1	-	-	1	1
Diacetone	Colorless Liquid	1	1	-	-	2	X	X	X	X	2	X	X	1	1	X
Diacetone Alcohol	Colorless Liquid	1	1	-	-	-	X	2	2	-	2	X	2	1	-	X
Diammonium Phosphate	In Water	1	1	-	-	1	1	1	1	1	1	-	1	-	-	1
Diazinon	In Petroleum Solvents	1	-	-	-	1	-	1	1	-	-	1	-	-	-	2
Dibenzyl Ether	Colorless Liquid	1	1	-	-	2	X	X	X	X	2	X	X	2	-	-
Dibutyl Ether	Colorless Liquid	1	1	-	-	-	X	X	X	X	2	X	X	1	-	-
Dibutyl Phthalate	Colorless Oily Liquid	1	1	-	-	1	X	X	X	X	2	2	X	2	-	1
Dibutylamine	Colorless Liquid	1	-	-	-	X	X	X	X	X	X	X	X	X	-	X
Dibutylsbacate	Clear Colorless Liquid	1	1	-	-	X	X	X	X	X	2	1	-	2	-	-
Dichloroacetic Acid	Colorless Liquid	1	-	-	-	-	X	-	2	-	X	X	X	-	-	-
Dichloroaniline	In Alcohol or Benzene	1	-	-	-	X	X	X	-	X	X	2	-	-	-	-
Dichlorobenzene (ortho)	Colorless Liquid	1	2	-	2	X	X	X	X	X	X	1	X	X	-	X
Dichlorobenzene (para)	White Crystals	1	-	-	-	X	X	X	X	X	X	1	X	-	1	X
Dichlorobenzyl Chloride	Colorless Liquid	1	2	-	2	X	X	X	X	X	X	1	X	X	-	X
Dichlorodifluoromethane (Freon 12)	Gas, Liquid @ 140 PSIG @ 100 F	1	-	-	-	2	1	1	X	2	X	2	1	X	1	X
Dichloroethane (Ethylene Dichloride)	Colorless Oily Liquid	1	2	-	2	X	X	X	X	X	-	2	X	X	2	X

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		Teflon	Gatron (XLPE)	Ultra High Molecular Polyethylene	Santoprene	Ethylene Propylene Diene (EPDM)	Nitrile / Buna-N / NBR	Styrene Butadiene	Natural Rubber	Neoprene	Butyl	Fluorocarbon	Hypalon	Chlorinated Polyethylene	Nylon	Polyvinyl Chloride
		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Dichloroethyl Ether	Colorless Liquid	1	-	-	-	-	X	-	X	-	X	-	X	-	-	-
Dichloroethylene	Colorless Liquid	1	2	X	-	X	X	X	X	X	X	1	X	-	-	-
Dichloroethylene (Acetylene Dichloride)	Colorless Liquid (bp 58-60 C)	1	2	X	2	X	-	X	X	-	X	1	-	X	1	X
Dichloromethane (Methylene Chloride)	Colorless Liquid	1	2	-	2	X	X	X	X	X	X	2	X	-	X	X
Dichloropentane	Light Yellow Liquid	1	-	-	-	X	X	X	X	X	X	1	X	-	-	-
Dichloropropane (Propylene Dichloride)	Colorless Liquid	1	-	-	-	X	X	-	X	X	X	2	X	-	-	-
Dicyclohexylamine	Colorless Liquid	1	-	-	-	X	-	X	X	X	X	X	X	-	-	-
DIDA (Diisodecyl Adipate)	Light Colored Oily Liquid	1	-	-	-	-	X	-	X	-	1	X	X	-	-	-
Diesel Fuel	Liquid	1	1	1	-	X	1	X	X	2	X	-	X	-	1	-
Diethanolamine (20%)	In Water or Alcohol	1	2	-	1	2	2	2	2	X	1	-	2	1	-	2
Diethanolamine (M.P. 83 deg F)	Liquid above 83 F	1	2	-	1	-	-	-	-	-	-	-	-	-	-	-
Diethyl Ether (Ethyl Ether)	Colorless Liquid	1	2	-	1	X	2	X	X	2	2	X	2	1	-	2
Diethyl Ketone	Colorless Liquid	1	2	-	2	2	X	-	X	X	2	X	X	-	-	X
Diethyl Oxalate	Colorless Oily Liquid	1	-	-	-	X	X	-	X	X	X	-	X	-	-	X
Diethyl Phthalate (Ethyl Phthalate)	Water White Liquid	1	1	-	-	-	X	X	X	-	2	-	-	2	-	-
Diethyl Sebacate	Colorless Liquid	1	1	-	-	-	X	X	X	X	2	2	X	2	-	-
Diethyl Sulfate	Colorless Liquid	1	-	-	-	1	X	1	X	1	2	X	X	-	-	-
Diethyl Sulfide (Ethyl Sulfide)	Colorless Oily Liquid	1	1	-	2	-	-	-	-	-	-	1	-	-	-	-
Diethylacetaldehyde (Ethylbutyraldehyde)	Colorless Liquid	1	1	-	2	-	-	-	-	-	-	-	-	-	-	-
Diethylamine	Colorless Liquid	-	2	2	2	-	-	-	-	-	-	-	-	-	-	-
Diethylbenzene	Colorless Liquid	1	1	-	-	X	-	X	X	-	X	1	-	2	-	-
Diethylene Dioxide (1,4 Dioxane)	Colorless Liquid	1	-	-	-	1	X	X	X	X	2	X	X	-	1	X
Diethylene Ether (Dioxane)	Colorless Liquid (bp 214 F)	1	1	-	1	2	X	X	X	X	2	X	-	2	-	-
Diethylene Glycol (Dihydroxydiethyl Ether)	Colorless Syrupy Liquid	1	1	-	1	1	1	1	1	1	1	1	-	1	1	1
Diethylene Glycol Methyl Ether (Methyl Cellosolve)	Colorless Liquid	1	1	-	1	1	-	X	X	-	X	1	X	1	-	-
Diethylene Glycol Monobutyl Ether	Colorless Liquid	1	1	-	1	1	-	-	-	-	-	1	-	-	-	-
Diethylene Glycol Monobutyl Ether Acetate	Colorless Liquid	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-
Diethylene Glycol Monoethyl Ether	Colorless Liquid	1	1	-	1	1	-	-	-	-	-	1	-	-	-	-
Diethylene Glycol Monomethyl Ether	Colorless Liquid	1	1	-	1	1	-	-	-	-	-	1	-	-	-	-
Diethylene Glycol Monomethyl Ether Acetate	Colorless Liquid	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-
Diethylenetriamine	Yellow Liquid	1	1	1	-	1	-	X	-	X	1	X	X	-	-	-
Dihydroxyacetone	In Water	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-
Dihydroxydiethyl ether (Diethylene glycol)	Colorless Syrupy Liquid	1	1	-	1	1	-	-	-	-	-	1	-	-	-	-
Diisobutyl Ketone	Colorless Liquid	1	1	-	1	1	X	X	X	X	2	X	X	2	1	-
Diisobutyl Phenol (Octyl Phenol)	White Flakes	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Diisobutyl Phthalate	Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Diisobutylene	Colorless Liquids	1	1	-	2	X	2	X	X	X	X	1	X	1	-	-
Diisodecyl Adipate (DIDA)	Light Colored Oily Liquid	1	-	-	-	-	X	-	X	-	1	X	X	-	-	-
Diisooctyl Phthalate (DIOP)	Nearly Colorless Liquid	1	-	-	-	1	X	-	X	-	1	X	X	-	-	-
Diisopropanolamine	Liquid above 108 F	1	-	-	-	-	2	-	2	-	1	-	-	-	-	-
Diisopropyl Ketone	Colorless Liquid	1	1	-	1	1	X	X	X	X	2	X	X	-	1	-
Diisopropylamine	Colorless Liquid (bp 184 F)	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Diisopropylbenzene (meta)	Colorless Liquid	1	2	2	-	X	-	-	-	-	-	1	-	-	-	-
Diisopropylidene Acetone (Phorone)	Yellow Liquid	1	1	-	2	2	X	X	X	X	2	X	X	-	-	-
Dilauryl Ether	Liquid above 92 F	1	1	-	1	1	-	-	-	-	-	X	-	-	-	-

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		Teflon	Ga	U	S	E	B	S	N	N	B	V	H	C	P	
		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Dimethyl Acetamide (DMAC)	Colorless Liquid	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Aniline	Yellow/brown Oily Liquid	1	1	-	1	X	X	X	X	X	2	1	X	2	-	-
Dimethyl Ether	Liquid under Pressure	1	1	1	1	1	X	X	X	X	2	X	X	-	-	-
Dimethyl Formamide	Water White Liquid	1	1	-	1	2	-	-	-	-	-	X	-	-	-	-
Dimethyl Phthalate	Colorless Oily Liquid	1	1	-	1	2	X	X	X	X	2	1	X	1	-	-
Dimethyl Sulfate (Methyl Sulfate)	Colorless Liquid	1	1	-	-	X	X	X	X	X	2	1	X	-	1	1
Dimethyl Sulfide	Colorless Liquid (bp 99 F)	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-
Dimethyl Sulfoxide	Colorless Liquid (mp 65 F)	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-
Dimethyl Terephthalate (M.P. 284 deg F)	Colorless Crystals, Liquid @ 284 F	-	-	-	-	-	X	X	-	X	X	1	-	-	-	-
Dimethylamine (DMA)	Liquid @ 70 PSIG @ 120 F	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylaminoethanol (Dimethylethanolamine)	Colorless Liquid	1	1	-	1	2	-	-	-	-	-	-	-	-	-	-
Dimethylaminomethyl Phenol (DMP)	Dark Red Liquid	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-
Dimethylbenzene (DMB)	Colorless Liquid	1	X	X	X	X	X	X	X	X	X	1	X	X	X	X
Dimethylcarbinol (isopropyl alcohol)	Colorless Liquid	1	1	1	1	1	-	-	-	-	-	1	-	-	-	-
Dimethylcyclohexylamine	Water White Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylformamide (DMF)	Water white Liquid	1	2	-	-	-	-	-	-	-	-	X	-	-	-	-
Dimethylketone (Acetone)	Colorless Liquid	1	1	1	1	1	-	-	-	-	-	X	-	-	-	-
Dimethylphenol (Xylenol)	White solid, liquid @ 68-169 F	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-
Dinitrobenzene (Soluble in Chloroform)	In Chloroform	1	2	-	-	X	-	-	-	-	-	1	-	-	-	-
Dinitrogen Tetroxide (Nitrogen Dioxide)	Liquid @ 50 PSIG @ 49 C	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Dinitrotoluene, Solid	In Alcohol or Ether	1	1	1	1	1	-	-	-	-	-	X	-	-	-	-
Diocyl Adipate di (2-ethylhexyl) adipate	Light Colored Oily Liquid	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-
Diocyl Phosphite, di-(2-ethylhexyl) phosphite	Colorless Liquid	1	1	-	1	X	-	-	-	-	-	1	-	-	-	X
Diocyl Phthalate, di-(2-ethylhexyl) phthalate	Light Colored Liquid	1	1	-	1	X	X	X	X	X	X	1	X	2	-	-
Diocyl Sebacate, di-(2-ethylhexyl) sebacate	Pale Straw Colored Liquid	1	1	-	1	-	X	X	X	X	2	1	X	X	-	-
Diocylamine di-(2-ethylhexyl)amine	Water White Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIOP (Diisooctyl Phthalate)	Nearly Colorless Liquid	1	-	-	-	1	X	-	X	-	1	X	X	-	-	-
Dioxane (Diethylene Dioxide)	Colorless Liquid	1	-	-	-	1	X	X	X	X	2	X	X	-	1	X
Dioxane (Diethylene Ether)	Colorless Liquid (bp 214 F)	1	1	-	1	2	X	X	X	X	2	X	-	2	-	-
Dioxolane (Ethylene Glycol Formal)	Water White Liquid (bp 165 F)	1	-	-	-	-	-	-	-	-	-	X	-	-	-	-
Dipentene (Cinene, Limonene)	Colorless Liquid (bp 347 F)	1	2	-	-	X	X	X	X	-	-	1	-	-	-	-
Diphenyl Phthalate (M.P. 158 deg F)	Yellow White Powder (mp 158 F)	1	1	-	1	-	-	-	-	-	-	1	-	-	-	-
Dipropyl Ketone	Colorless Liquid (bp 291 F)	1	1	-	1	1	-	-	-	-	-	X	-	-	-	-
Dipropylamine	Water White Liquid (bp 228 F)	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Dipropylene Glycol	Colorless Liquid (bp 451 F)	1	1	1	1	1	-	-	-	-	-	1	-	-	-	-
Dipropylene Glycol Monomethyl Ether (DPM)	Colorless Liquid (bp 372 F)	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-
Dirco Oils	Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	1	-
Disodium Phosphate (DSP soluble in H2O)	Colorless or White Powder	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disodium Phosphate Solution	In Water	1	1	1	1	1	-	-	-	-	-	1	-	-	-	-
Distillate Fuel Oil	Clear to Brown Liquid	1	2	-	-	X	-	-	-	-	-	1	-	-	-	-
Divinylbenzene (20-25% or 50-60% Grades)	Water White to Straw Liquid	1	2	-	-	X	-	-	-	-	-	1	-	-	-	-
DMA (Dimethylamine)	Gas	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-
DMAC (Dimethyl Acetamide)	Colorless Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
DMB (Dimethylbenzene)	Colorless Liquid	1	X	X	X	X	X	X	X	X	X	1	X	X	X	X
DMF (Dimethylformamide)	Water white Liquid	1	2	-	2	-	-	-	-	-	-	X	-	-	-	-

# Fluid Resistance Data For Common Gasket And Seal Elastomers

Rating Legend: 1 = Excellent , 2 = Good , X = NOT RECOMMENDED , - = Insufficient Information

Chemical Name	Common Form	CAUTION: All ratings contained in this data are ment as guidelines ONLY! This does not warrant or guarantee any of the elastomers listed for any application. Testing under actual conditions is always recommended. WARNING: The use of the wrong gasket, seal, or hose liner could lead to a leak, loss of products or emmissions to the environment.														
		Teflon	Gatron (XLPE)	Ultra High Molecular Polyethylene	Santoprene	Ethylene Propylene Diene (EPDM)	Nitrile / Buna-N / NBR	Styrene Butadiene	Natural Rubber	Neoprene	Butyl	Fluorocarbon	Hypalon	Chlorinated Polyethylene	Nylon	Polyvinyl Chloride
		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
DMP (Dimethylaminomethyl phenol)	Dark Red Liquid	1	1	-	2	-	-	-	-	-	-	1	-	-	-	-
Dodecylbenzene (Detergent Alkylate)	Liquid	1	2	-	2	X	-	-	-	-	-	1	-	-	-	-
Dodecylphenol	Straw Colored Liquid (bp 310+ F)	1	1	-	1	1	-	-	-	-	-	1	-	-	-	-
Dolomite	Gray, Pink or White Powder	-	-	-	-	2	1	-	-	1	-	1	1	-	-	-
Dowtherm A (Biphenyl and Biphenyl Ether Mix.)	Liquid above 158 F	1	1	-	1	1	X	X	X	X	X	1	X	2	-	X
Dowtherm SR-1 (Ethylene Glycol)	Liquid	1	1	1	1	1	1	-	-	-	1	1	-	1	-	-
DPM (Dipropylene Glycol Monomethyl Ether)	Colorless Liquid (bp 372 F)	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-
Duro Oils	Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	1	2
<b>E</b>																
EDB (Ethylene Dibromide)	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	X
EDTA (Ethylenediaminetetraacetic Acid)	Colorless Crystals	1	1	-	-	1	-	-	-	-	-	1	-	-	-	-
Emulsion (Oil in Water)	Water is Continuous Phase	1	1	1	1	1	-	-	-	-	-	1	-	-	-	-
Enamels	Liquid	1	1	-	-	X	-	-	-	-	-	1	-	-	1	2
Epichlorohydrin (Chloropropylene Oxide)	Volatile Liquid (bp 239 F)	1	2	-	-	X	-	-	-	-	-	X	-	-	-	-
Epoxy Resin	Solid Pellet	-	-	-	-	1	-	-	-	1	2	X	-	-	-	-
Essential Oils	Liquid	1	2	-	-	X	1	X	X	2	-	1	-	-	-	2
Ethanol (Ethyl Alcohol)	Colorless Liquid	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Ethanolamine (Aminoethanol)	Colorless Viscous Liquid	1	1	1	1	2	2	2	2	2	1	X	X	1	1	2
Ethers	Liquids	1	1	X	1	1	2	X	X	X	2	X	2	1	-	2
Ethyl Acetate (Acetic Ether)	Colorless Liquid	1	1	1	2	2	X	X	X	X	2	X	X	2	1	X
Ethyl Acetoacetate	Colorless Liquid	1	1	-	-	2	X	X	X	X	2	X	X	1	-	-
Ethyl Acrylate	Colorless Liquid	1	2	-	2	2	X	X	X	X	X	X	X	2	-	X
Ethyl Acrylate, Inhibited	Colorless Liquid	1	2	-	2	2	X	X	X	X	X	X	X	2	-	X
Ethyl Alcohol (Ethanol)	Colorless Liquid	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Ethyl Aluminum Dichloride (EADC M.P. 90 deg F)	Clear Yellow Liquid	1	-	-	-	-	X	-	X	-	X	2	X	-	-	-
Ethyl Bromide	Colorless Liquid	1	2	-	-	X	X	X	X	X	X	1	X	2	1	X
Ethyl Butyl Ether (Butyl Ethyl Ether)	Liquid	1	-	-	-	-	2	-	X	-	X	-	2	-	-	-
Ethyl Butyrate	Colorless Liquid	1	1	-	-	-	X	X	X	X	2	-	-	-	-	-
Ethyl Chloride	Compressed Liquid	1	2	-	-	X	X	X	X	X	X	1	X	-	-	X
Ethyl Chloroformate (Ethyl Chlorocarbonate)	Water White Liquid	1	-	-	-	X	X	-	-	-	-	1	-	-	-	-
Ethyl Ether (Diethyl Ether)	Colorless Liquid	1	2	-	1	X	X	X	X	X	2	X	X	1	-	X
Ethyl Ether Acetate (Cellosolve Acetate)	Colorless Liquid	1	1	-	-	2	X	-	-	-	-	X	-	1	-	1
Ethyl Formate	Water White Liquid	1	-	-	-	2	X	-	-	-	-	1	-	-	-	-
Ethyl Iodide	Colorless Liquid	1	-	-	-	X	X	-	X	X	X	2	X	-	-	-
Ethyl Isobutyrate	Colorless Liquid	1	-	-	-	X	X	-	X	X	X	-	-	-	-	-
Ethyl Mercaptan (Ethanethiol)	Colorless Pungent Liquid	1	1	-	-	X	X	X	X	X	X	1	X	-	-	X
Ethyl Methyl Ketone (MEK)	Colorless Liquid	1	1	1	1	2	X	-	-	X	-	X	X	2	1	X
Ethyl Oleate	Light Yellowish Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyl Oxalate	Colorless Liquid	1	1	-	-	2	X	2	2	X	2	1	-	1	-	-
Ethyl Pentachlorobenzene	Colorless Liquid	1	1	-	-	X	X	X	X	X	X	1	X	-	-	-
Ethyl Phthalate (Diethyl phthalate)	Water White Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyl Propionate	Water White Liquid	1	-	-	-	X	X	-	X	X	X	-	-	-	-	-
Ethyl Propyl Ketone (3-Hexanone)	Colorless Liquid	1	-	-	-	-	X	-	X	-	2	X	X	-	-	-
Ethyl Silicate	Colorless Liquid	1	1	-	-	2	1	2	2	1	-	1	-	-	-	-

# Fluid Resistance Data For Common Gasket And Seal Elastomers

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		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Ethyl Sulfide (Diethyl Sulfide)	Colorless Oily Liquid	1	1	-	-	-	-	-	-	-	1	-	-	-	-	
Ethylamine	Colorless Liquid or Gas	1	2	-	1	-	X	X	X	2	X	X	1	-	-	
Ethylbenzene	Colorless Liquid	1	2	-	-	X	X	X	X	X	1	X	2	-	-	
Ethylbutanol (2-Ethylbutyl Alcohol)	Colorless Liquid	1	1	1	1	1	1	-	-	1	1	1	2	1	1	
Ethylbutyl Alcohol (Ethylbutanol)	Colorless Liquid	1	1	1	1	1	1	-	-	1	1	1	2	1	1	
Ethylbutyl Amine	Water White Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	-	
Ethylbutyl Ketone	Clear Liquid	1	1	-	-	1	-	-	-	-	X	-	-	-	-	
Ethylbutyraldehyde (Diethylacetaldehyde)	Colorless Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	-	
Ethylcellulose	Granular Solid	1	1	-	-	-	-	1	-	-	-	-	1	-	-	
Ethylene Chlorohydrin	Colorless Liquid	1	1	-	2	X	X	-	-	X	2	1	-	X	X	
Ethylene Cyanohydrin	Straw Colored Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ethylene Dibromide (EDB)	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	X	
Ethylene Dichloride (Chloroethane)	Colorless Liquid	1	2	2	2	X	X	X	X	X	1	X	X	X	X	
Ethylene Glycol	Clear Colorless Syrupy Liquid	1	1	1	1	1	1	-	-	1	1	1	2	1	-	
Ethylene Glycol Formal (Dioxolane)	Water White Liquid (bp 165 F)	1	-	-	-	-	-	-	-	-	X	-	-	-	-	
Ethylene Glycol Monoethylether	Colorless Liquid	1	1	-	1	2	-	-	-	-	-	-	-	-	-	
Ethylene Glycol Monoethylether Acetate	Colorless Liquid	1	1	-	1	2	-	-	-	-	-	-	-	-	-	
Ethylene Glycol Monomethyl Ether	Colorless Liquid	1	1	-	1	2	-	-	-	-	-	-	-	-	-	
Ethylene Glycol N-Butyl Ether	Colorless Liquid	1	1	-	1	2	-	-	-	-	-	-	-	-	-	
Ethylenediamine	Colorless Liquid	1	2	-	-	2	1	-	-	-	2	X	-	-	-	
Ethylenediaminetetraacetic acid (EDTA)	Colorless Crystals	1	1	-	-	1	-	-	-	-	1	-	-	-	-	
Ethylhexaldehyde	Colorless Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	-	
Ethylhexanediol	Colorless Liquid	1	1	-	-	2	-	-	-	-	-	-	-	-	-	
Ethylhexanol (2-ethylhexyl alcohol)	Colorless Liquid	1	1	1	1	1	1	1	1	-	1	1	-	1	1	
Ethylhexoic Acid	Liquid	1	1	1	-	2	-	-	-	-	-	-	-	-	-	
Ethylhexyl Acetate	Water White Liquid	1	1	-	-	1	X	-	-	X	-	X	X	-	1	
Ethylhexyl Acrylate	Liquid	1	2	-	2	-	X	-	-	-	-	X	-	-	X	
Ethylhexyl Alcohol (Ethylhexanol)	Colorless Liquid	1	1	1	1	1	1	1	1	-	1	1	-	1	1	
<b>F</b>																
Fatty Acid	Solid, Semisolid or Liquid	1	2	2	2	2	2	-	-	2	-	1	X	2	-	
Fatty Alcohol, Blend	C8-11 Liquids, >C11 Solids	1	1	1	1	1	1	1	1	1	1	1	-	1	1	
Fatty Petroleum Alcohol	C11 or Less are Liquids	1	1	1	1	1	1	-	-	-	1	1	-	1	1	
Ferric Bromide	Red Crystals	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
Ferric Chloride	Black-Brown Solid	1	1	-	-	-	2	-	1	2	1	1	2	1	1	
Ferric Chloride solution	Liquid	1	1	-	-	-	2	-	1	2	1	1	2	1	1	
Ferric Nitrate	Violet Crystals	1	1	-	-	-	-	2	1	2	2	-	2	1	-	
Ferric Nitrate Solution	Liquid	1	-	-	-	1	1	-	1	1	1	1	1	-	1	
Ferric Sulfate	Yellow Crystals or Gray Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
Ferric Sulfate Solution	Liquid	1	1	-	-	2	2	2	-	2	2	-	2	1	-	
Ferrous Acetate Solution	Liquid in H2O or Alcohol	1	1	-	-	-	-	-	-	-	-	1	-	-	-	
Ferrous Chloride	Greenish-White Crystals	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
Ferrous Chloride, Solution	Liquid	1	1	-	-	-	-	-	-	-	1	1	2	1	-	
Ferrous Nitrate	Liquid	1	1	-	-	2	2	-	-	2	2	-	2	-	2	
Ferrous Sulfate Solution	Liquid	1	1	-	-	2	2	-	-	2	2	-	2	1	-	

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		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Fertilizer (Liquid Manure)	Liquid	1	1	1	1	1	1	1	1	1	1	1	1	1	2	
Finishing Oil	Liquid	1	-	1	-	-	-	-	-	-	-	-	-	-	-	
Fire-Resistant Hydra-Fluid (Texaco)	Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	-	
Firtec 290, MF	Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	-	
Fish Oil	Liquid	1	-	1	-	-	-	-	-	-	-	-	-	-	-	
Fixing Solution (Photo)	Liquid	1	1	-	-	-	-	2	2	2	2	-	2	-	1	
Flint	Gray, Brownish, Black	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
Floor Wax (Temperature Dependent)	Varies	1	-	1	-	-	-	-	-	-	-	-	-	-	-	
Fluoboric Acid (48% Purity)	Colorless Liquid	1	1	1	1	2	-	2	2	2	-	-	2	1	-	
Fluoboric Acid (up to 48%)	Colorless Liquid	1	1	-	-	1	-	2	2	2	-	1	2	1	-	
Fluorine (Liquid @ -307 deg F & 14.7 psi)	Pale Yellow Gas	X	-	X	-	X	-	-	-	-	-	1	-	-	X	
Fluorine (Liquid)	Yellow Liquid	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Fluosilic Acid (50%)	Colorless Liquid	1	1	1	1	2	X	-	-	2	X	-	2	1	X	
Formaldehyde	Gas	-	1	-	1	1	-	-	-	-	-	1	-	-	1	
Formaldehyde Solution (up to 50%)	Liquid	1	2	-	1	1	2	X	X	2	2	1	2	1	1	
Formalin (37-50% HCHO with 15% MeOH)	Liquid	1	1	-	1	1	2	X	X	2	2	1	2	1	1	
Formamide	Colorless Oily Liquid	1	1	-	-	-	-	X	X	-	-	-	-	-	X	
Formic Acid	Colorless Liquid (bp 100 C)	1	1	1	1	2	-	X	X	1	2	X	2	1	X	
FR Fluid D	Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	-	
FR Hydraulic Fluid	Brown Liquid	1	1	-	-	-	1	-	-	-	-	-	-	-	-	
Freon 12 (Dichlorodifluoromethane)	Gas, Liquid @ 140 PSIG @ 100 F	1	-	-	-	2	1	1	X	2	X	2	1	X	1	
Freon 13	Liquid @ 560 PSIG, 27 C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Freon 134a (HFC 134a)		-	2	-	-	-	-	-	-	-	-	-	-	-	-	
Freon 22 (Chlorodifluoromethane)	Gas (Liquid @ 150 PSIG, 120 F)	1	-	-	-	1	X	1	-	1	X	1	1	X	1	
Freon 23	Clear Liquid	1	-	-	-	X	-	-	-	-	-	2	-	-	-	
Fruit Juices	Liquid	-	-	-	1	-	-	-	-	-	-	-	-	-	1	
Fuel Oil (ASTM 1-6)	Water White to Brown Liquids	1	2	1	X	X	1	X	X	2	X	1	X	1	1	
Fumaric Acid	Colorless Crystals	1	1	1	1	2	-	2	2	-	-	1	-	-	X	
Fumaric Acid Solution (Allomalaic Acid)	Liquid	1	1	-	-	2	1	2	2	-	-	1	-	-	X	
Furan (Furfuran)	Colorless to Brown Liquid	1	1	-	-	X	X	X	X	X	X	-	-	1	-	
Furfural (Ant Oil)	Colorless to Reddish Brown Liquid	1	1	-	2	X	X	X	X	2	X	2	2	1	-	
Furfural Alcohol	Colorless to Brown Liquid	1	1	2	2	X	X	X	X	2	X	1	2	1	1	
Furfuran (Furan)	Colorless to Brown Liquid	1	1	-	-	X	X	X	X	X	X	-	-	1	-	
Furfuryl Alcohol	Colorless to Reddish Brown Liquid	1	1	-	2	-	-	-	-	-	-	1	-	-	1	
Fusel Oil (Amyl Alcohol, Grain Oil)	Colorless Liquid	1	-	-	-	2	1	-	2	1	2	1	1	-	-	
Fyrguard 150, 200		1	1	-	-	1	1	-	-	-	1	-	-	-	-	
Fyrquel 15R&O, 220R&O, 550R&O		1	1	-	-	1	X	-	-	-	1	-	-	-	-	
Fyrquel 90, 150, 220, 300, 550, 1000		1	1	-	-	1	X	-	-	-	1	-	-	-	-	
<b>G</b>																
Gallic Acid (3,4,5 Trihydroxybenzoic Acid)	In Alcohol or Glycerol	1	1	1	1	1	X	2	2	X	2	1	-	1	X	
Gallic Acid Solution	In Alcohol Solution	1	1	-	1	-	X	2	2	X	2	1	-	1	X	
Gasohol (Gasoline blended with Ethanol)	Colorless Liquid	1	2	1	X	X	2	X	X	2	X	1	X	-	1	
Gasoline (Oxygenated - Blended With MTBE)	Colorless Liquid	1	2	1	X	X	2	X	X	2	X	1	X	-	1	
Gasoline (Unleaded Up to 50% Aromatics)	Colorless Liquid	1	2	1	X	X	2	X	X	2	X	1	X	-	1	

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		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Gasoline (White)	Colorless Liquid	1	2	-	X	X	2	X	X	2	X	1	X	-	1	X
Gelatin	Flakes or Powder	-	-	-	-	-	-	1	-	-	-	-	-	-	1	1
Glacial Acetic Acid	Clear Colorless Liquid	1	1	1	1	2	-	-	-	X	2	X	-	1	X	2
Glacial Methacrylic Acid (GMAA)	White Crystals	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Glauber's Salt (Sodium Sulfate Decahydrate)	Crystals or Powder	1	-	-	-	1	-	1	1	-	-	-	-	-	-	-
Gluconic Acid (Commercial 50% Aqueous)	Aqueous Solution	1	-	-	-	-	X	-	X	-	X	-	2	-	-	-
Glucose	Crystals to White Powder	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Glucose Solution	Liquid	1	1	-	1	1	1	1	1	1	1	1	1	-	-	1
Glue	Varies	1	1	-	-	X	2	X	X	2	X	1	1	-	2	1
Glycerine (Glycerol)	Clear Viscous Liquid	1	1	-	1	1	1	1	1	1	1	1	1	1	-	1
Glycerol (Glycerine)	Clear Viscous Liquid	1	1	-	1	1	1	1	1	1	1	1	1	1	-	1
Glycerol Monolaurate	Liquid above 27 C	1	1	1	1	1	-	-	-	-	1	1	-	-	-	-
Glycol FR Fluids	Liquid	1	-	-	-	1	1	-	-	-	1	-	-	-	-	-
Glycol Slurry	Watery suspension	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-
Glycols (ie Ethylene Glycol)	Clear Colorless Liquid	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-
GMAA (Glacial Methacrylic Acid)	White Crystals	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Graphite	Powdered, Flake, Crystals	1	-	1	-	-	-	1	-	-	-	-	-	-	-	-
Grease	Semi-Solid	1	1	2	2	X	1	X	X	2	X	1	2	-	-	1
Grease, Silicone Base		1	-	1	-	-	-	-	-	-	-	-	-	-	1	-
Green Liquor (Effluent Alkaline Pulping)	Liquid	1	1	1	2	-	-	-	-	-	-	-	-	-	-	1
Green Sulfate Liquor	Liquid	1	1	1	2	1	2	1	1	1	1	-	1	2	-	-
<b>H</b>																
Halowax (Chlorinated Hydrocarbons)	Oils to Waxy Solid	1	1	1	2	X	X	X	X	X	X	1	X	-	-	-
HEA (2-Hydroxyethyl Acrylate)	Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
HEA Acid (2-Hydroxyethyl Acrylate)	Liquid	1	1	1	1	2	-	-	-	-	-	1	-	1	-	-
Hematite (Iron Ore)	Black to Brick Red	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-
HEP (2-Hydroxypropyl Acrylate)	Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor (In Xylene)	Liquid	1	2	-	X	X	2	X	X	X	X	1	-	-	1	X
Heptanal (Heptaldehyde)	Colorless Oily Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptane	Colorless Liquid	1	2	1	X	X	1	X	X	2	X	1	X	1	1	2
Heptanedicarboxylic Acid (Azelaic Acid)	Yellowish to White Powder	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Heptanoic Acid	Clear Oily Liquid	1	1	1	-	-	-	-	-	-	-	1	-	-	-	-
Heptanol	Colorless Liquid	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Hexachlorocyclohexane	White to Yellowish Flakes	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	Yellow Liquid	1	-	-	-	X	-	X	X	-	X	1	-	-	-	-
Hexadecanoic Acid (Palmitic Acid)	White Crystals	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Hexahydrophthalic Anhydride	Clear Colorless Viscous Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexaldehyde	Colorless Liquid	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-
Hexamethylenediamine, Solution	Colorless Flat Solid Leaflets	-	-	-	2	-	-	-	1	-	-	-	-	-	-	-
Hexamethylenimine	Clear Colorless Liquid	1	2	-	2	-	-	-	-	-	-	-	-	-	-	-
Hexane	Colorless Liquid	1	-	-	-	X	1	X	X	-	X	1	-	1	1	X
Hexanol (Hexyl Alcohol)	Colorless Liquid	1	1	-	2	X	1	-	-	2	-	1	X	1	-	-
Hexanone (Ethyl Propyl Ketone)	Colorless Liquid	1	2	-	2	-	X	-	X	-	2	X	X	-	-	-
Hexene	Colorless Liquid	1	-	-	-	X	2	X	X	-	X	1	-	1	-	-

# Fluid Resistance Data For Common Gasket And Seal Elastomers

Rating Legend: 1 = Excellent , 2 = Good , X = NOT RECOMMENDED , - = Insufficient Information

Chemical Name	Common Form	CAUTION: All ratings contained in this data are ment as guidelines ONLY! This does not warrant or guarantee any of the elastomers listed for any application. Testing under actual conditions is always recommended.  WARNING: The use of the wrong gasket, seal, or hose liner could lead to a leak, loss of products or emmissions to the environment.														
		Teflon	Gatron (XLPE)	Ultra High Molecular Polyethylene	Santoprene	Ethylene Propylene Diene (EPDM)	Nitrile / Buna-N / NBR	Styrene Butadiene	Natural Rubber	Neoprene	Butyl	Fluorocarbon	Hypalon	Chlorinated Polyethylene	Nylon	Polyvinyl Chloride
		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Hexyl "Cellosolve" (EG monohexyl ether)	Water White Liquid	1	1	1	2	-	-	-	-	-	-	1	-	-	-	-
Hexyl Alcohol (Hexanol)	Colorless Liquid	1	1	-	1	X	1	-	-	2	-	1	X	1	-	-
Hexyl Methacrylate	Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexylamine	Water White Liquid	1	-	-	-	-	X	-	X	-	2	X	X	-	-	-
Hexylene (1-Hexene)	Colorless Liquid	1	-	-	-	X	2	X	X	-	X	1	-	1	-	-
Hexylene Glycol	Colorless Liquid	1	1	1	1	1	-	-	-	-	-	1	-	-	-	-
Honey	Yellow Liquid	1	-	-	1	1	1	-	1	1	-	1	-	-	-	1
Houghto-Safe 1055, 1110, 1115, 1120, 1130	Liquid	1	1	-	-	1	X	-	-	-	1	-	-	-	-	-
Houghto-Safe 271, 416, 520 & 616, 620	Liquid	1	1	-	-	1	1	-	-	-	1	-	-	-	-	-
Houghto-Safe 5046	Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	-	-
Houghto-Safe 625, 640 & 525 (Under 100 deg F)	Liquid	1	1	-	-	1	1	-	-	-	1	-	-	-	-	-
HPA Acid (2-Hydroxypropyl Acrylate)	Liquid	1	1	1	1	2	-	-	-	-	-	1	-	1	-	-
HPO (Sodium Thiosulfate)	White Powder	1	1	-	2	-	1	1	1	1	1	-	1	1	1	1
Hy-Chock Oil	Liquid	1	1	-	-	-	1	-	-	-	-	1	-	-	1	-
Hydrocyanic Acid (up to 98%)	Water White Liquid	1	1	-	2	-	-	-	-	-	-	1	-	-	-	-
Hydrafluid 760 (Texaco and Houghton)	Liquid	1	1	-	-	X	1	-	-	-	X	1	-	-	1	-
Hydrafluid AZR&O, A, B, AA, C	Liquid	1	1	-	-	X	1	-	-	-	X	1	-	-	1	-
Hydrasol A (Textile Dying)	Liquid	1	1	-	-	X	1	-	-	-	X	1	-	-	1	-
Hydraulic Fluid (Phosphate Ester Base)	Liquid	1	1	-	-	1	X	-	-	X	1	1	-	-	1	1
Hydraulic Fluid (Polyalphaolifin)	Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Hydraulic Fluid (Std. Petroleum Oils)	Liquid	1	1	-	-	X	1	X	X	2	X	1	2	1	1	1
Hydraulic Fluid (Water Glycol Base)	Liquid	1	1	-	-	-	1	2	2	1	1	1	-	-	1	1
Hydraulic Fluid HF-18, HF-20	Liquid	1	1	-	-	1	1	-	-	-	1	1	-	-	1	2
Hydraulic Fluid HF-31	Liquid	1	1	-	-	X	-	-	-	-	X	-	-	-	1	-
Hydrazine	Colorless Fuming Liquid	1	1	-	-	2	X	X	X	X	2	X	X	-	-	X
Hydrazine Hydrate	Colorless Fuming Liquid	1	1	-	-	2	X	X	X	X	2	X	X	-	-	X
Hydrazine Solution	Liquid	1	1	-	-	2	X	X	X	X	2	X	X	-	-	X
Hydro-Drive Oil (Houghton)	Liquid	1	-	-	-	X	1	-	-	-	X	-	-	-	-	2
Hydrobromic Acid (62% and less)	Colorless to Yellow Liquid	1	1	1	1	X	X	2	2	X	2	1	2	1	X	X
Hydrobromic Acid (to 48%)	Colorless to Yellow Liquid	1	1	1	1	1	X	2	2	X	2	1	2	1	X	X
Hydrochloric Acid (15%)	Colorless to Yellow Liquid	1	1	1	1	2	X	2	2	X	2	1	2	1	X	X
Hydrochloric Acid (37%)	Colorless to Yellow Liquid	1	1	1	1	X	-	2	2	X	2	1	2	1	X	X
Hydrochloric Acid, anhydrous	Colorless Fuming Gas	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Hydrocyanic Acid (10% Solution with water)	Water White Liquid	1	1	1	-	-	X	2	2	X	-	1	2	-	-	X
Hydrocyanic Acid (98% or less)	Water White Liquid below 25 C	1	-	-	-	-	-	-	-	-	-	1	-	-	-	X
Hydrocyanic Acid (up to 20%)	Water White Liquid	1	1	-	-	1	2	2	2	2	-	1	1	-	-	2
Hydrofluoric Acid (38% or less)	Colorless Liquid (bp 112 C)	1	1	1	1	2	X	X	X	2	2	1	1	1	X	X
Hydrofluoric Acid (47% or less)	Colorless Liquid	1	1	1	1	2	X	X	X	2	2	1	2	1	X	X
Hydrofluoric Acid (53 % or less)	Colorless Liquid	X	1	X	1	-	X	X	X	2	X	1	2	1	X	X
Hydrofluoric Acid (70%)	Colorless Liquid	X	1	X	1	X	X	X	X	-	-	1	2	-	X	X
Hydrofluoric Acid (Concentrated)	Colorless Liquid	X	1	X	2	X	X	X	X	X	X	2	2	1	X	X
Hydrofluosilicic Acid	In Water	1	1	1	2	2	2	2	2	2	1	1	1	1	-	2
Hydrogen (Gas)	Gas	1	-	-	-	1	1	-	-	1	-	1	1	-	1	1
Hydrogen Bromide Liquified (Anhydrous)	Liquid @ 600 PSI, 49 C	1	-	-	-	1	X	X	X	-	X	1	-	-	-	-
Hydrogen Bromide Solution (HydroBromic Acid)	Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-



# Fluid Resistance Data For Common Gasket And Seal Elastomers

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Chemical Name	Common Form	CAUTION: All ratings contained in this data are ment as guidelines ONLY! This does not warrant or guarantee any of the elastomers listed for any application. Testing under actual conditions is always recommended.  WARNING: The use of the wrong gasket, seal, or hose liner could lead to a leak, loss of products or emmissions to the environment.																												
		Teflon	Gatron (XLPE)		Ultra High Molecular Polyethylene		Santoprene		Ethylene Propylene Diene (EPDM)		Nitrile / Buna-N / NBR		Styrene Butadiene		Natural Rubber		Neoprene		Butyl		Fluorocarbon		Hypalon		Chlorinated Polyethylene		Nylon		Polyvinyl Chloride	
		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC														
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G														
Hydrogen Bromide, Anhydride	Colorless Gas	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-														
Hydrogen Chloride	Colorless Fuming Gas	1	-	-	-	-	-	-	-	-	-	1	-	1	-	-														
Hydrogen Dioxide (Hydrogen Peroxide)	Liquid	1	-	-	-	2	X	-	-	2	-	1	1	-	-	-														
Hydrogen Fluoride	Colorless Gas or Liquid	1	-	-	-	1	X	X	X	-	2	X	-	-	-	-														
Hydrogen Peroxide (35% or less)	Liquid	1	1	1	2	1	2	X	X	1	X	1	1	1	1	1														
Hydrogen Peroxide (50% or less)	Liquid	1	2	1	2	1	2	X	X	1	X	1	1	1	2	2														
Hydrogen Peroxide (70% or less)	Liquid	1	2	1	2	2	X	X	X	2	-	1	1	1	X	2														
Hydrogen Peroxide (90% or less)	Liquid	1	2	1	2	2	X	X	X	2	-	1	1	-	X	X														
Hydrogen Peroxide (Hydrogen Dioxide)	Liquid	1	2	-	2	2	X	-	-	2	-	1	1	-	-	-														
Hydrogen Sulfide	Colorless Gas	1	-	1	-	1	-	-	-	-	-	1	1	-	-	1														
Hydrogen Sulfide, Liquified	Liquid @ 410 PSI, 49 C	1	-	-	-	1	X	X	-	2	X	X	-	-	-	-														
Hydrolube (Water Glycol)	Liquid	1	1	1	1	1	1	-	-	2	2	1	-	-	-	1														
Hydrolubric Oil (Houghton)	Liquid	1	1	-	-	X	2	-	-	-	X	-	-	-	1	2														
Hydroquinone	White Crystals	1	1	-	-	X	-	X	X	X	X	2	X	-	-	-														
Hydroquinone Solution	Liquid	1	-	-	-	-	X	X	-	X	X	1	-	-	-	2														
Hydroxyacetic Acid	Colorless Crystals	-	-	-	2	-	-	-	1	-	-	-	-	-	-	-														
Hydroxyacetic Acid Solution	Liquid	1	1	1	1	2	-	-	-	-	-	-	-	-	-	-														
Hydroxyethyl Acrylate (HEA)	Liquid	1	1	-	2	-	-	-	-	-	-	-	-	-	-	-														
Hydroxyethyl Acrylate Acid (HEA Acid)	Liquid	1	1	1	1	2	-	-	-	-	-	1	-	1	-	-														
Hydroxyethyl Methacrylate	Clear Liquid	1	-	-	2	-	-	-	-	-	-	1	-	-	-	-														
Hydroxyethyl Methacrylate Solution in Xylene	Clear Liquid	1	2	-	2	-	-	-	-	-	-	1	-	-	-	-														
Hydroxypropyl Acrylate Acid (HPA Acid)	Liquid	1	1	1	1	2	-	-	-	-	-	1	-	1	-	-														
Hylene (Toluene Diisocyanate)	Yellow Liquid	1	-	-	-	2	X	X	X	X	2	X	X	-	-	-														
Hypochlorous Acid (only in dilute solutions)	Greenish-Yellow Aqueous Sol.	1	1	1	1	2	X	X	X	X	X	1	2	-	-	-														
<b>I</b>																														
Ink (Printers)	Liquid	1	1	-	2	X	-	X	X	-	X	X	-	-	1	-														
Ink Oil	Liquid	1	2	-	2	-	2	-	-	-	-	-	-	-	-	-														
Insulating Oil (Transformer)	Liquid	1	1	-	2	X	1	X	X	2	X	1	X	-	-	-														
Iodine	Grayish Black Granules	1	-	-	-	-	-	-	1	X	-	-	-	-	-	X														
Iodine Solution	Liquid	1	1	1	1	1	-	-	-	-	-	1	-	-	-	-														
Iodine, In Alcohol	Liquid	1	1	1	1	1	-	X	X	2	-	1	-	1	-	1														
Iron Acetate Liquor (Black Liquor)	Black Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1														
Iron Hydroxide	Brown precipitate	1	-	-	-	1	1	-	X	1	1	1	1	-	-	-														
Iron Ore (Hematite)	Black to Brick Red	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-														
Iron Oxide (Black, Brown, Red or Yellow)	Solid	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-														
Iron Oxide Slurry	Slurry	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-														
Iron Salts		1	-	-	-	1	1	-	1	1	1	1	1	-	1	1														
Iron Sulfate Solution (Ferric Sulfate)	Liquid	1	1	1	1	-	1	-	-	-	-	1	-	-	-	1														
Iron Sulfide Solution (Ferrous Sulfide)	Liquid	1	1	-	2	-	-	-	-	-	-	1	-	-	-	-														
Isoamyl Acetate	Colorless Liquid	1	-	-	-	2	X	-	X	X	X	X	X	-	-	-														
Isoamyl Alcohol (Isobutyl Carbinol)	Colorless Liquid	1	-	-	-	2	2	-	2	2	2	2	2	-	-	-														
Isoamyl Bromide		1	-	-	-	X	X	-	X	X	X	2	X	-	-	-														
Isoamyl Butyrate	Water White Liquid	1	-	-	-	-	X	-	X	-	X	X	X	-	-	-														
Isoamyl Chloride	Colorless to Yellow Liquid	1	2	-	-	-	-	-	-	-	-	1	-	-	-	-														

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		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
		Teflon	Gatron (XLPE)	Ultra High Molecular Polyethylene	Santoprene	Ethylene Propylene Diene (EPDM)	Nitrile / Buna-N / NBR	Styrene Butadiene	Natural Rubber	Neoprene	Butyl	Fluorocarbon	Hypalon	Chlorinated Polyethylene	Nylon	Polyvinyl Chloride
Isoamyl Ether	Colorless Liquid	1	-	-	-	-	X	-	X	-	X	X	X	-	-	-
Isoamyl Phthalate	Colorless Liquid	1	-	-	-	-	X	-	X	-	2	X	X	-	-	-
Isobutane	Colorless Gas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isobutane Liquid	Liquid @ 98 PSIG, 49 C	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Isobutanol (Isobutyl Alcohol)	Colorless Liquid	1	1	1	1	1	2	2	2	2	2	1	1	1	1	2
Isobutene (Isobutylene)	Gas	1	-	-	-	X	1	X	X	-	2	X	-	-	-	-
Isobutyl Acetate	Colorless Liquid	1	-	-	-	X	X	-	X	X	X	X	X	-	-	-
Isobutyl Alcohol (Isobutanol)	Colorless Liquid	1	1	1	1	1	2	2	2	2	2	1	1	1	1	2
Isobutyl Aldehyde (Isobutyraldehyde)	Colorless Liquid	1	-	-	-	2	X	-	X	X	X	X	X	-	-	-
Isobutyl Carbinol (Primary Isoamyl Alcohol)	Colorless Liquid	1	-	-	-	2	2	-	2	2	2	2	2	-	-	-
Isobutylamine	Colorless Liquid	1	-	-	-	-	X	-	X	-	2	X	X	-	-	-
Isobutylene (Isobutene)	Gas	1	-	-	-	X	1	X	X	-	2	X	-	-	-	-
Isobutylene Liquid (Isobutene Liquid)	Liquid @ 88 PSIG, 49 C	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Isobutyraldehyde (Isobutyl Aldehyde)	Colorless Liquid	1	-	-	-	2	X	-	X	X	X	X	X	-	-	-
Isocyanate (Toluene Diisocyanate)	Water White to Yellow Liquid	1	2	-	2	X	X	X	X	X	X	1	-	-	-	-
Isooctane	Colorless Liquid	1	2	-	2	X	1	X	X	1	X	1	1	2	1	X
Isooctyl Adipate	Viscous Liquid	1	1	-	-	-	-	-	-	-	1	-	-	-	-	-
Isooctyl Alcohol	Clear Liquid	1	1	1	1	1	-	-	-	-	1	-	-	-	-	-
Isooctyl Thioglycolate	Water White Liquid	1	1	-	2	2	-	-	-	-	1	-	-	-	-	-
Isopentane	Colorless Liquid	1	2	-	-	-	-	-	-	-	1	-	-	-	-	-
Isophorone	Water White Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isophthaloyl Chloride	Liquid above 41 C	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Isopropanol (Isopropyl Alcohol)	Colorless Liquid	1	1	1	1	1	1	2	2	2	1	1	2	1	1	2
Isopropanolamine (MIPA)	Liquid	1	2	-	2	-	2	-	2	-	1	X	X	-	-	-
Isopropyl Acetate	Colorless Liquid	1	1	1	1	2	X	X	X	X	2	-	X	-	1	X
Isopropyl Alcohol (Isopropanol)	Colorless Liquid	1	1	1	1	1	1	2	2	2	1	1	2	1	1	2
Isopropyl Benzene (Cumene)	Colorless Liquid	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Isopropyl Chloride	Colorless Liquid	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Isopropyl Ether	Colorless Liquid	1	1	1	2	X	X	X	X	X	2	X	X	-	1	X
Isopropylamine	Colorless Liquid	1	-	-	2	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene (Cumene)	Colorless Liquid	1	2	-	-	-	-	-	-	-	-	-	-	2	-	-
Isopropyltoluene (Cymene)	Colorless Liquid	1	-	-	-	-	-	-	-	-	1	-	-	1	-	-
<b>J</b>																
Jet Fuel A and A1	Liquid	1	-	-	-	-	1	-	-	-	1	-	-	-	-	-
Jet Fuel JP1	Liquid	1	1	-	-	X	1	X	X	2	X	1	X	-	1	X
Jet Fuel JP10 (Tetrahydrodicyclopentadiene)	Liquid	1	-	-	-	X	X	X	X	X	X	1	X	-	1	X
Jet Fuel JP4	Liquid	1	1	-	-	X	1	X	X	2	X	1	X	-	1	X
Jet Fuel JP5	Liquid	1	1	-	-	X	1	X	X	X	X	1	X	-	1	X
Jet Fuel JP8	Liquid	1	1	-	-	X	1	X	X	X	X	1	X	-	1	X
Kaolin Clay	White to Yellowish Powder	1	-	1	-	-	-	-	1	-	-	-	-	-	-	-
Karo Syrup	Yellow Liquid	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1
Kerosene	Water White Oily Liquid	1	1	-	X	X	2	X	X	X	X	1	X	1	1	2
Ketchup	Red Liquid	-	-	-	1	-	1	-	-	1	-	-	-	-	1	-
Ketoglutaric Acid	In Water or Alcohol	1	1	1	1	2	-	-	-	-	-	-	-	-	-	-

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		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Ketones (ie Acetone, MEK, Cyclohexanone )	Generally Liquids	1	1	1	1	2	X	X	X	X	2	X	X	-	1	X
Koch Acid	White Solid	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
<b>L</b>																
Lacquer - Alcohol or Acetate as Solvent	Solution	1	1	1	1	2	-	-	-	-	-	X	-	-	-	-
Lacquer - Toluene or Xylene as Solvent	Solution	1	-	-	-	-	X	X	X	X	X	1	X	-	1	X
Lactic Acid (90% or less)	Colorless-Yellow Liquid (mp 18 C)	1	1	1	1	2	X	2	2	1	-	1	1	-	-	X
Lactic Acid, Food Grade - 50-80%	Colorless to Yellow Liquid	1	1	1	1	2	-	X	X	-	X	1	1	-	-	-
Lactic Acid, Plastic Grade - 50-80% or less	Colorless to Yellow Liquid	1	1	1	1	2	1	-	-	1	-	1	1	-	X	1
Lactic Acid, USP 85-90% or less	Colorless to Yellow Syrupy Liquid	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Lactol		1	1	-	2	-	2	-	-	2	-	-	-	-	-	-
Lard (Fat of the Hog)	Liquid above 42 C	1	1	1	2	X	1	X	X	2	X	-	X	1	-	-
Lard Oil	Colorless to Yellow Liquid	1	1	-	2	-	-	-	-	2	-	X	-	-	-	-
Lasso (Alachlor)	Colorless Crystals	-	1	-	1	-	-	-	1	-	-	-	-	-	-	-
Latex Paint	Liquid	1	1	1	1	1	1	2	2	-	2	1	-	-	1	1
Lauroyl Peroxide	White Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Lauryl Alcohol	Liquid above 24 C	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Lead Acetate	White Crystals	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Lead Acetate Solution	Solution	1	1	1	1	1	2	2	2	-	2	1	-	1	-	1
Lead Arsenate	White Crystals	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Lead Arsenate Solution (In Nitric Acid)	Solution	1	1	-	-	-	-	-	-	-	-	1	2	-	-	-
Lead Nitrate Solution (In Water or Alcohol)	Solution	1	1	1	1	1	1	2	2	2	2	1	-	1	-	1
Lead Silicate (basic)	White Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Lead Sulphate (Basic, Blue Basic, Tribasic)	White to Blue Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Lead, Tetraethyl (Tetraethyl Lead)	Colorless Oily Liquid	1	1	-	2	X	2	X	X	X	X	1	X	-	-	1
Lead, Tetramethyl (Tetramethyl Lead)	Colorless Liquid	1	2	-	2	X	2	X	X	X	X	1	X	-	-	-
Lecithin	Light Brown Viscous Liquid-Solid	1	1	-	1	-	X	-	-	2	-	-	-	-	-	-
Ligroin (Hydrocarbon Boiling @ 60-110C)	Clear Liquid	1	2	-	-	X	1	X	X	X	X	1	X	-	1	X
Lime (Calcium Oxide)	White to Gray Lumpy Solid	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Lime Sulfur Solution	Solution	1	1	1	1	2	X	X	X	1	X	1	2	-	-	2
Lime, Chlorinated (Bleaching Solution)	Solution	1	1	1	1	2	2	2	2	X	2	1	X	-	-	2
Lime, Chlorinated (normal 35-37% Chlorine)	White Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Lime, Hydraulic (Calcined Limestone)	Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Lime, Slaked (Calcium Hydroxide)	White Crystalline Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Limestone	Powder or Lumps	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Limonene	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	1	-
Lindane (Ag Spray)		1	1	-	1	-	-	-	-	-	-	-	-	-	1	-
Linoleic Acid	Colorless to Straw Colored Liquid	1	1	1	-	X	2	-	-	X	X	1	-	-	-	1
Linseed Oil	Yellow Amber to Brown Liquid	1	1	X	2	2	2	X	X	2	-	1	1	1	1	1
Liquid Soap	Liquid	1	1	1	-	2	-	2	2	-	2	-	-	-	-	2
Lithium Chloride	White Crystals	-	-	X	-	-	-	-	1	-	-	-	-	-	-	-
Lithium Chloride (35-40% Brine)	Solution	X	1	X	-	-	-	-	-	-	-	1	-	-	-	-
Lubricating Oil (Diester Under 135 deg F)	Liquid	1	1	-	-	X	2	X	X	-	X	1	-	-	-	X
Lubricating Oil (SAE 10, 20, 30, 40, & 50)	Liquid	1	-	-	-	-	2	-	-	2	-	-	-	-	1	-
Lubricating Oil (Under 120 deg F)	Liquid	1	1	-	-	X	1	X	X	2	X	1	2	1	1	2

# Fluid Resistance Data For Common Gasket And Seal Elastomers

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		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
<b>M</b>																
Machine Oil (Under 135 deg F)	Liquid	1	1	-	-	X	1	X	X	1	X	1	2	-	1	2
Magnesite	White to Brown Crystalline Solid	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Magnesium	Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Magnesium Acetate	Colorless Crystalline Aggregate	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Magnesium Acetate Solution	In Water or Alcohol	1	1	1	1	1	1	1	1	-	1	1	1	1	1	1
Magnesium Carbonate	White Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Magnesium Carbonate Solution (in Acid)	Liquid Solution	1	1	1	1	-	-	-	-	-	1	-	-	-	-	-
Magnesium Chloride	Colorless to White Crystals	1	1	1	1	-	-	-	1	-	-	-	-	-	-	-
Magnesium Chloride Brine	Solution	1	1	1	1	1	1	-	1	-	-	1	-	-	-	-
Magnesium Chloride, Hydrated (in H2O or Alcohol)	Solution	1	1	1	1	1	-	-	1	-	-	1	-	-	-	-
Magnesium Hydroxide	White Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Magnesium Hydroxide Solution (in Dilute Acid)	Liquid Solution	1	1	1	1	-	-	-	-	-	1	-	-	-	-	-
Magnesium Nitrate	White Crystals	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Magnesium Nitrate Solution (in H2O or Alcohol)	Liquid Solution	1	1	1	1	1	1	-	-	-	-	1	-	-	-	-
Magnesium Oxide, Dry	White Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Magnesium Oxide, Slurry		1	1	-	1	1	2	-	2	1	-	1	-	-	-	-
Magnesium Sulfate Solution	Liquid Solution	1	1	1	1	1	1	1	1	2	1	1	1	1	-	1
Malathion (Ag Spray Dilute)	Clear to Amber Liquid	1	1	1	1	2	-	X	X	-	1	1	-	-	1	1
Malathion (Ag Spray)	Clear to Amber Liquid	1	1	-	-	2	-	-	-	-	1	-	-	-	1	-
Maleic Acid	Liquid above 131 C	1	1	1	1	1	2	2	2	X	X	1	2	-	-	X
Maleic Acid Solution	Solution	1	1	1	1	1	2	2	2	X	-	1	-	-	-	X
Maleic Anhydride	Colorless Needles	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maleic Anhydride (Heated Liquid)	Liquid above 53 C	1	-	X	-	-	-	-	-	-	-	-	-	-	-	-
Malic Acid (dl form)	Colorless Crystals	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Malic Acid Solution (in H2O or Alcohol)	Solution	1	1	1	1	2	-	-	-	-	-	1	-	-	-	-
Malt Extract (Maltine)	Light Brown Viscous Liquid	1	1	1	1	1	-	-	-	-	-	1	-	-	-	-
Malt, Dry	Yellow to Amber Grain	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Maltine (Malt Extract)	Light Brown Viscous Liquid	1	1	1	1	1	-	-	-	-	-	1	-	-	-	-
Manganese Salts		1	1	-	-	-	1	X	X	-	-	1	1	-	-	1
Manganese Sulfate (Manganous Sulfate)	Pale Red Solid	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Manganese Sulfate Solution	Solution in Water	1	1	-	-	-	1	2	2	-	-	1	1	1	-	1
Manganese Sulfide (Manganous Sulfide)	Green Crystals	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Manganese Sulfite (Manganous Sulfite)	Black to Brownish Red Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
MAPP Gas (Methylacetylene Propadiene)	Liquid @ 107 PSIG @ 20 C	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Maxmul (Penzoil Hydraulic Fluid)	Liquid	1	-	-	-	-	1	-	-	2	-	-	-	-	-	-
Mayonnaise	Semi-Liquid	1	1	-	2	-	-	-	-	-	-	-	-	-	-	1
MBK (Methyl Butyl Ketone)	Colorless Liquid	1	1	-	2	2	X	X	X	X	2	X	X	2	-	X
MEA (Ethanolamine)	Colorless Viscous Liquid	1	1	1	1	2	2	2	2	2	1	X	X	1	-	2
MEK (Ethyl Methyl Ketone)	Colorless Liquid	1	1	1	2	2	X	-	-	X	-	X	X	2	1	X
Mercuric Chloride	White Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Mercuric Chloride Solution (in H2O, or Alcohol)	Solution	1	1	-	-	2	2	2	1	1	2	-	1	1	-	2
Mercuric Cyanide	Colorless Transparent Prisms	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Mercuric Cyanide Solution (in H2O or Alcohol)	Solution	1	1	-	-	2	2	2	2	1	2	-	1	-	-	-

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		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Mercurous Nitrate Solution	Solution	1	1	1	-	2	-	-	-	-	-	1	-	-	-	
Mercury	Silver Liquid	1	1	1	-	-	2	2	2	1	2	-	1	1	-	
Mercury Vapor	Gas above 458 F	1	1	-	-	-	2	2	2	1	2	-	1	-	-	
Mesityl Oxide (Methyl Isobutenyl Ketone)	Colorless Oily Liquid	1	1	1	2	2	X	X	X	X	2	X	X	2	-	
Mesitylene (Trimethylbenzene)	Liquid	1	-	-	-	X	X	X	X	X	X	1	-	-	1	
Metallic Soaps (Aluminium, Calcium, Zinc)	Solids @ Room Temperature	1	1	1	-	X	1	X	X	-	X	1	2	1	-	
Methallyl Alcohol (Methylallyl Alcohol)	Colorless Liquid	1	-	-	-	-	1	-	2	-	2	2	2	-	-	
Methane	Gas	1	-	-	-	-	1	-	-	-	-	1	-	-	-	
Methanol (Methyl Alcohol)	Colorless Liquid	1	1	1	1	1	1	1	1	1	1	X	1	1	1	
Methionine	White Crystalline Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
Methoxychlor Solution (in Alcohol)	Solution	1	1	-	1	-	-	-	-	-	-	-	-	-	1	
Methyamine (Monomethylamine)	Liquid @ 120 PSIG @ 49 C	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
Methyl Acetate	Colorless Liquid	1	2	-	2	2	X	X	X	X	2	X	X	1	1	
Methyl Acetoacetate	Colorless Liquid	1	-	-	2	2	X	-	X	X	2	X	X	-	-	
Methyl Acetone	Water White Liquid	1	-	-	-	1	X	-	X	-	2	X	X	-	-	
Methyl Acrylate (Inhibited)	Colorless Liquid	1	2	-	2	2	X	X	X	X	X	X	X	-	-	
Methyl Acrylate Acid(Methylacrylic Acid)	White Solid (trans mp 72 C)	1	1	1	1	2	2	X	X	-	1	1	-	1	X	
Methyl Alcohol (100%) (Methanol)	Colorless Liquid	1	1	1	1	1	1	1	1	1	1	X	1	1	1	
Methyl Bromide	Liquid @ 55 PSIG @ 49 C	1	1	-	2	X	X	X	X	X	X	1	X	-	1	
Methyl Bromoacetate	Colorless to Straw Colored Liquid	1	1	1	-	-	-	-	-	-	-	-	-	-	-	
Methyl Butanathiol (Butyl Mercaptan)	Liquid	1	1	-	2	X	-	X	X	-	X	1	-	-	-	
Methyl Butanol (2-Methyl-1-Butanol)	Colorless Liquid	1	1	1	1	1	1	-	-	-	1	1	-	1	1	
Methyl Butyl Ketone (MBK)	Colorless Liquid	1	1	-	2	2	X	X	X	X	2	X	X	2	-	
Methyl Carbitol (Diethylene Glycol Methyl Ether)	Colorless Liquid	1	1	-	1	1	-	X	X	-	X	1	X	1	-	
Methyl Cellosolve (Diethylene Glycol Methyl Ether)	Colorless Liquid	1	1	-	1	1	-	X	X	-	X	1	X	1	-	
Methyl Chloride	Liquid @ 160 PSIG @ 49 C	1	2	-	2	X	X	X	X	X	X	1	X	X	-	
Methyl Chloroform (1,1,1 Trichloroethane)	Colorless Liquid	1	-	-	2	X	X	X	X	X	X	1	X	X	X	
Methyl Chloroformate	Colorless Liquid	1	-	-	-	X	X	X	X	X	X	1	X	-	-	
Methyl Cyanide (Acetonitrile)	Colorless Liquid (bp 82 C)	1	1	2	1	2	X	2	2	2	2	-	2	1	-	
Methyl Cyclohexane	Colorless Liquid	1	-	-	-	X	1	X	X	-	X	1	X	2	1	
Methyl Ethyl Ketone (MEK)	Colorless Liquid	1	2	-	1	2	X	X	X	X	2	X	X	2	1	
Methyl Formate	Colorless Liquid	1	1	-	1	2	X	X	X	2	2	X	X	-	-	
Methyl Hexanol		1	-	-	-	-	1	-	1	-	1	2	1	-	-	
Methyl Hexanone (Methyl Isoamyl Ketone)	Colorless Liquid	1	-	-	-	-	X	-	X	-	2	X	X	-	-	
Methyl Hexyl Ketone	Colorless Liquid	1	-	-	-	-	X	-	X	-	2	X	X	-	-	
Methyl Isoamyl Ketone (Methyl Hexanone)	Colorless Liquid	1	-	-	-	-	X	-	X	-	2	X	X	-	-	
Methyl Isobutenyl Ketone (Mesityl Oxide)	Colorless Oily Liquid	1	1	1	2	2	X	X	X	X	2	X	X	2	-	
Methyl Isobutyl Ketone (MIBK)	Colorless Liquid	1	2	-	2	-	X	X	X	X	2	X	X	2	1	
Methyl Isopropyl Ketone	Colorless Liquid	1	2	-	2	2	X	X	X	X	2	X	X	2	1	
Methyl Methacrylate	Colorless Liquid	1	2	-	2	2	X	X	X	X	X	X	2	2	-	
Methyl Methacrylate Monomer, Inhibited	Colorless Liquid	1	1	-	1	X	X	X	X	X	X	X	X	-	X	
Methyl Phenol (Cresol)	Liquid above 95 F	1	2	-	2	-	X	X	X	X	2	1	X	1	X	
Methyl Propyl Carbinol (2 Pentanol)	Colorless Liquid	1	1	1	1	1	-	-	-	-	1	1	-	1	-	
Methyl Propyl Ether	Colorless Liquid	1	-	-	-	-	X	-	X	-	X	-	2	-	-	
Methyl Propyl Ketone (Pentanone)	Water White Liquid	1	-	-	-	2	X	-	X	X	2	X	X	-	-	

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		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Methyl Salicylate	Yellow to Red Liquid	1	1	-	2	2	2	-	-	2	2	-	-	-	1	
Methyl Stearate	Liquid above 38 C	1	1	-	2	-	-	-	-	-	-	-	-	-	-	
Methyl Sulfate (Dimethyl Sulfate)	Colorless Liquid	1	-	-	-	X	X	X	X	X	2	X	X	-	1	1
Methyl-2-Pyrrolidone	Colorless Liquid	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-
Methyl-n-Amyl Carbinol	Colorless Liquid	1	1	-	1	-	-	-	-	-	-	-	-	1	-	-
Methyl-n-Amylketone	Water White Liquid	1	1	-	2	-	-	-	-	-	-	-	-	-	-	-
Methylacetylene Propadiene (MAPP Gas)	Liquid @ 107 PSIG @ 20 C	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Methylacrylic Acid (Crotonic Acid)	White Crystalline Solid	1	1	1	1	2	2	X	X	-	1	1	-	1	X	-
Methylal	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Methylallyl Alcohol (Methallyl Alcohol)	Colorless Liquid	1	-	-	-	-	1	-	2	-	2	2	2	-	-	-
Methylallyl Chloride	Colorless to Straw Colored Liquid	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Methylamine (30-40% in H2O)	Colorless Liquid	1	1	-	1	2	X	-	-	-	-	-	-	-	-	X
Methylamine (Anhydrous)	Liquid @ 120 PSIG @ 49 C	1	-	-	-	-	-	-	-	-	-	-	-	-	-	X
Methylamyl Acetate	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylamyl Alcohol	Colorless Liquid	1	1	-	1	-	-	-	-	-	1	-	-	-	-	-
Methylaniline	Colorless to Brown Liquid	1	1	1	1	2	X	-	-	X	-	1	2	-	X	X
Methyldiethanolamine	Colorless Liquid	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-
Methylene Bromide	Clear Liquid	1	-	-	-	-	2	-	-	-	-	1	-	-	-	X
Methylene Chloride (Dichloromethane)	Colorless Liquid	1	1	2	2	X	X	X	X	X	X	2	X	X	X	X
Methylene Dichloride	Colorless Liquid	1	1	-	2	X	X	X	X	X	X	1	X	X	X	X
Methylene Dichloride (Methylene Chloride)	Colorless Liquid	1	1	2	2	X	X	X	X	X	X	1	X	X	X	X
Methylene Diphenyl Diisocyanate, MDI	Liquid above 37 C	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-
Methylstyrene	Colorless Liquid	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-
MIBK (Methyl Isobutyl Ketone)	Colorless Liquid	1	2	-	2	-	X	X	X	X	2	X	X	2	1	X
Milk	White Liquid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mineral Oil	Colorless Liquid	1	1	1	2	X	1	X	X	1	X	1	1	1	1	1
Mineral Spirits (VM&P Naptha)	Colorless Liquid	1	1	-	2	X	1	X	X	-	X	1	X	-	1	-
MIPA (Isopropanolamine)	Liquid	1	-	-	-	-	2	-	2	-	1	X	X	-	-	-
Mobile Therm 603	Liquid	1	1	-	1	-	1	-	-	-	-	1	-	-	-	-
Molasses	Brown Liquid	1	1	-	1	1	2	2	2	2	1	1	1	-	-	2
Monochloroacetic Acid	Colorless to Light Brown Crystals	-	-	X	-	-	-	1	-	-	-	-	-	-	-	-
Monochloroacetic Acid Solution (in H2O or Alcohol)	Liquid Solution	1	1	X	1	2	-	-	-	-	-	-	-	-	X	-
Monochlorobenzene	Clear Liquid	1	2	-	2	X	X	X	X	X	X	1	X	X	2	X
Monoethanolamine	Colorless Liquid	1	2	-	2	-	2	-	-	-	2	X	X	1	-	-
Monoethylamine	Liquid @ 15 PSIG @ 49 C	1	-	-	-	1	X	X	2	X	2	X	X	-	-	-
Monoethylamine Solution (70% or less)	Liquid Solution	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-
Monoglycerides	Liquid to Solid	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Monomethylamine (Methyamine)	Liquid @ 120 PSIG @ 49 C	1	-	-	-	-	-	-	-	-	-	-	-	-	-	X
Monopentaerythritol (Pentaerythritol)	White Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Monopentaerythritol Solution	Liquid Solution	1	1	1	1	1	-	-	-	-	-	1	-	-	-	-
Monosodium Phosphate (Monobasic)	White Powder	-	1	-	1	-	-	-	1	-	-	-	-	-	-	-
Morpholine	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mortar, Inorganic	Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Motor Oil	Liquid	1	1	-	-	X	1	X	X	2	X	1	2	1	1	2
Mould Oil	Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-

# Fluid Resistance Data For Common Gasket And Seal Elastomers

Rating Legend: 1 = Excellent , 2 = Good , X = NOT RECOMMENDED , - = Insufficient Information

Chemical Name	Common Form	CAUTION: All ratings contained in this data are ment as guidelines ONLY! This does not warrant or guarantee any of the elastomers listed for any application. Testing under actual conditions is always recommended. WARNING: The use of the wrong gasket, seal, or hose liner could lead to a leak, loss of products or emmissions to the environment.														
		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Mouth Wash	Liquid	1	-	1	1	-	-	-	-	-	-	-	-	-	-	
MTBE (Methyl Tertiary Butyl Ether)	Colorless Liquid	-	2	-	2	-	-	-	-	-	X	-	-	-		
Muriatic Acid (Hydrochloric)	Colorless to Yellow Liquid	1	1	1	1	X	X	2	2	X	2	1	2	1	X	X
Mustard	Liquid	1	-	-	2	-	-	1	1	1	1	-	1	-	-	
<b>N</b>																
n-Hexaldehyde	Colorless Liquid	1	1	-	2	2	X	X	X	2	1	-	-	-	-	
N-Methyl-2-Pyrrolidone	Colorless Liquid	-	2	-	2	-	-	-	-	-	-	-	-	-	-	
n-Octane	Colorless Liquid	1	2	1	2	X	1	X	X	-	X	1	X	1	1	X
Naphtha (Low Aromatic Content)	Liquid	1	1	-	2	X	2	X	X	X	X	1	X	1	-	X
Naphthalene	White Crystalline Flakes	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
Naphthenic Acid	Commercial Grade is Dark Fluid	1	1	-	2	-	2	-	-	-	-	1	-	-	-	1
Neohexane	Colorless Liquid	1	-	-	-	X	1	-	-	2	-	1	-	-	1	-
Neutral Oil	Liquid	1	1	1	2	X	2	X	X	2	X	1	-	-	1	-
Nickel Acetate	Green Crystals	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
Nickel Acetate Solution (In Water or Alcohol)	Solution	1	1	1	1	2	-	2	2	-	1	-	-	-	-	
Nickel Carbonate	Green to Brown Crystals/Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
Nickel Chloride	Brown Deliquescent Scales	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
Nickel Chloride Solution (In Water or Alcohol)	Solution	1	1	-	1	2	2	2	2	2	2	1	2	1	-	1
Nickel Nitrate	Green Deliquescent Crystals	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
Nickel Nitrate Solution (In Water or Alcohol)	Solution	1	1	-	2	2	2	2	2	2	2	1	2	1	-	2
Nickel Plating Solution	Liquid	1	1	-	1	-	2	2	2	-	-	-	2	-	-	X
Nickel Salts		1	1	-	1	1	1	1	1	1	1	1	1	-	1	2
Nickel Sulfate	Yellow Green to Blue Crystals	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
Nickel Sulfate Solution	Solution	1	1	-	1	2	2	2	2	2	2	1	2	1	-	1
Nicotine Salts (ie Nicotine Hydrochloride)	Colorless Oil	1	1	-	1	-	-	-	-	-	-	-	-	-	-	1
Niter Cake (Sodium Bisulfate)	Colorless Crystals to White Lumps	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
Niter Cake Solution	Solution	1	1	1	1	2	-	X	X	-	2	1	1	1	-	-
Nitric Acid (25% or less)	Colorless Liquid	1	1	1	1	2	X	X	X	X	2	1	1	1	X	X
Nitric Acid (10%)	Transparent or Yellowish Liquid	1	1	1	1	1	X	X	X	X	2	1	2	1	X	X
Nitric Acid (25%)	Transparent or Yellowish Liquid	1	1	1	2	-	X	2	2	X	2	1	2	1	X	X
Nitric Acid (35% or less, 26 Degrees Baume)	Colorless Liquid	1	1	1	2	2	X	X	X	X	2	1	1	X	X	X
Nitric Acid (52% or less, 36 Degrees Baume)	Colorless to Yellow Liquid	1	2	2	2	X	X	X	X	X	X	1	2	X	X	X
Nitric Acid (61% or less, 40 Degrees Baume)	Colorless to Yellow Liquid	1	2	X	X	X	X	X	X	X	X	1	2	X	X	X
Nitric Acid (63.5% or less)	Transparent or Yellowish Liquid	1	2	X	2	X	X	X	X	X	X	1	X	X	X	X
Nitric Acid (67% or less, 42 Degrees Baume)	Colorless to Yellow Liquid	1	X	X	X	X	X	X	X	X	X	1	X	X	X	X
Nitric Acid (95% or less, 48.5 Degrees Baume)	Yellow Liquid	1	X	X	X	X	X	X	X	X	X	1	X	X	X	X
Nitric Acid (Red Fuming)	Red Liquid	1	X	X	X	X	X	X	X	X	X	1	X	X	X	X
Nitrobenzene	Yellow Liquid @ 6 C	1	2	-	1	2	X	X	X	X	X	2	X	X	2	X
Nitroethane	Colorless Liquid	1	1	-	-	2	X	2	2	X	2	-	2	1	-	-
Nitrogen (Cryogenic Liquid)	Liquid @ -196 C	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Nitrogen (Gas)	Colorless Gas	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Nitrogen Dioxide (Nitrogen Tetroxide)	Liquid @ 50 PSIG @ 49 C	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Nitrogen Fertilizer (Ammonia, Urea)	Solutions in Water	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Oxide (Nitrous Oxide)	Gas	1	1	-	1	1	X	X	X	X	1	1	1	1	X	X

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		Teflon	Gatron (XLPE)	Ultra High Molecular Polyethylene	Santoprene	Ethylene Propylene Diene (EPDM)	Nitrile / Buna-N / NBR	Styrene Butadiene	Natural Rubber	Neoprene	Butyl	Fluorocarbon	Hypalon	Chlorinated Polyethylene	Nylon	Polyvinyl Chloride
		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Nitrogen Tetroxide (Nitrogen Dioxide)	Liquid @ 50 PSIG @ 49 C	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Nitromethane	Colorless Liquid	1	-	-	-	2	X	-	2	X	2	X	X	-	1	X
Nitropropane	Colorless Liquid	1	1	-	-	2	X	X	X	X	2	X	-	-	1	-
Nitrosyl Chloride	Yellow-Red Liquid or Gas	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrous Acid (Up to 10%)	Light Blue Liquid	1	1	1	-	-	-	-	1	-	-	1	-	1	1	1
Nitrous Oxide (Nitrogen Oxide)	Gas	1	1	-	1	2	X	X	X	X	1	1	1	1	X	X
Nitrous Oxide, Compressed Liquid	Liquid @ 800 PSIG @ 20 C	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nonene (1-nonylene)	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Nonyl Alcohol (Octyl Carbinol)	Colorless Liquid	1	1	1	1	-	1	-	-	-	-	1	-	-	-	-
Nonylene (Nonene)	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
<b>O</b>																
Octadecanoic Acid (Stearic Acid)	Colorless Waxy Solid	1	1	1	2	2	2	-	-	2	2	1	2	1	1	1
Octanoic Acid (Caprylic Acid)	Colorless, Oily Liquid	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Octanol (Octyl Alcohol)	Colorless Liquid	1	1	-	1	-	2	2	2	2	-	1	-	1	1	2
Octene	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Octyl Acetate	Colorless Liquid	1	-	-	-	-	X	-	X	-	X	X	1	-	-	-
Octyl Alcohol (Octanol)	Colorless Liquid	1	1	-	1	-	2	2	2	2	-	1	-	1	1	2
Octyl Aldehyde	Colorless Liquid	1	-	-	-	-	X	-	X	-	X	X	X	-	-	-
Octyl Carbinol (Nonyl Alcohol)	Colorless Liquid	1	1	1	1	-	1	-	-	-	-	1	-	-	-	-
Octyl Phenol (Diisobutyl Phenol)	White Flakes	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Octylamine	Water White Liquid	1	-	-	-	-	X	-	X	-	2	X	X	-	-	-
Oil (SAE Motor Oils)	Liquid	1	1	-	X	X	1	X	X	2	X	1	2	1	1	2
Oil of Turpentine	Liquid	1	2	2	-	X	1	X	X	2	X	1	X	-	1	1
Oils, Animal (High Fatty Acid Content)	Solid to Liquids	1	2	-	2	X	1	X	X	2	2	1	X	1	-	2
Oils, Mineral (Aliphatic or Aromatic)	Liquids	1	2	-	2	X	2	X	X	X	X	1	2	2	1	X
Oils, Vegetable (Soybean, Coconut, Corn)	Liquids	1	1	-	2	X	1	X	X	-	X	1	X	-	1	-
Oleic Acid (fatty acid)	Yellow to Red Oily Liquid	1	1	X	1	2	2	X	X	2	2	1	2	1	-	2
Oleum (Fuming Sulfuric, 30% SO3 or less)	Clear to Off White Fuming Liquid	1	X	X	X	X	X	X	X	X	X	1	X	X	X	X
Olive Oil	Yellow to Green Liquid	1	1	1	2	2	2	X	X	X	2	1	X	2	1	2
ortho-Dichlorobenzene (also meta and para)	Colorless Liquid	1	2	-	2	X	X	X	X	X	X	1	X	X	1	X
ortho-xylene (1,2 Dimethylbenzene)	Clear Colorless Liquid	1	2	-	2	X	X	X	X	X	X	1	X	X	-	X
OS 45 Hydraulic Fluid (Silicate Ester Base)	Liquid	1	-	-	-	X	2	X	X	1	X	1	2	-	-	-
Oxalic Acid	Transparent Crystals	1	-	2	-	-	-	-	1	-	-	-	-	-	-	-
Oxalic Acid (50%)	Crystals in H2O	1	2	1	2	2	X	X	X	X	2	1	2	1	X	X
Oxygen	Colorless Gas	1	1	-	1	1	2	2	2	-	1	1	1	1	-	-
Oxygen, Refrigerated Liquid	Liquid @ 200 PSIG @ -146 C	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Ozone	Gas	1	2	2	1	1	X	X	X	2	2	2	2	1	2	1
<b>P</b>																
Paint (Emulsion or Latex)	Liquid	1	1	1	1	2	2	-	-	-	-	1	-	-	1	1
Paint (Inorganic)	Liquid	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Paint (Oil or Solvent Based)	Liquid or Paste	1	1	-	2	X	2	X	X	-	X	1	X	-	1	-
Paint Remover	Liquid or Paste	1	2	-	2	X	X	X	X	X	X	1	X	-	X	-
Paint Resin		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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		Teflon	Gatlon (XLPE)	Ultra High Molecular Polyethylene	Santoprene	Ethylene Propylene Diens (EPDM)	Nitrile / Buna-N / NBR	Styrene Butadiene	Natural Rubber	Neoprene	Butyl	Fluorocarbon	Hypalon	Chlorinated Polyethylene	Nylon	Polyvinyl Chloride
		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Palm Oil	Yellow to Brown Solid	1	1	-	2	-	1	X	X	2	2	-	2	-	-	-
Palmitic Acid (Hexadecanoic Acid)	Crystals in Hot Alcohols	1	1	1	2	2	2	X	X	2	2	1	X	1	-	-
Papermakers Alum (Aluminim Ammonium Sulfate)	In Water	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Paraffin (Aliphatic Hydrocarbon)	Varies from Gas to Waxy Solid	1	1	1	2	X	1	X	X	2	X	1	X	1	-	-
Paraformaldehyde	White Solid - Flakes or Powder	1	-	-	-	-	2	-	1	2	-	-	-	-	-	1
Paraldehyde	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paranox (Detergent, Disperser; Exxon)		1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Parapol (Liquid Polyisobutylene; Exxon)	Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Peanut Oil	Yellow to Green Liquid	1	1	-	2	-	1	-	-	2	X	-	-	-	-	2
Pelargonic Acid	Colorless to Yellow Oil	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachloroethane	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Pentachlorophenol In Oil	In Oil (Wood Preservative)	1	1	1	2	X	X	X	X	X	1	1	-	-	-	X
Pentaerythritol (Monopentaerythritol)	White Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Pentane	Colorless Liquid	1	X	X	X	X	-	-	-	-	-	1	-	1	-	-
Pentanol (Methyl Propyl Carbinol)	Colorless Liquid	1	1	1	1	1	-	-	-	-	1	1	-	1	-	-
Pentanone (Methyl Propyl Ketone)	Water White Liquid	1	-	-	-	-	-	-	-	-	-	X	-	-	-	-
Pentasol (Amyl alcohols, primary and secondary)	Liquid	1	2	2	2	2	2	2	2	2	2	1	2	-	-	2
Perchloric Acid (70%)	70% or Less with H2O	1	2	1	2	-	-	2	2	2	2	1	2	-	X	X
Perchloroethylene	Colorless Liquid	1	2	-	X	X	X	X	X	X	X	1	X	2	2	X
Petroleum Coke	Solid Pellets	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Petroleum Distillate	Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Petroleum Ether (Naptha)	Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Petroleum Naptha (Toluene/cyclohexane/Xylene)	Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Petroleum Naptha Flash Point Over 200 Degrees	Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Petroleum Oils (Refined)	Liquid	1	1	1	X	X	1	X	X	2	X	1	2	-	1	1
Petroleum Oils (Sour)	Liquid	1	1	1	X	X	1	X	X	2	X	1	X	-	-	2
Petroleum Paraffin Wax	Solid with low Melt Points	1	2	2	2	X	-	-	-	-	-	1	-	-	-	-
Phenol (Carbolic Acid)	White or Pink Crystals	1	2	-	2	2	X	X	X	X	2	1	X	1	X	X
Phenol Acid	95% or less with H2O	1	2	2	2	2	X	X	X	X	2	1	X	1	X	X
Phenolates		1	-	-	-	-	X	-	-	X	-	2	X	-	2	-
Phenolsulfonic Acid	Yellow to Brown Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Phenothiazine	Greenish Powder or Flakes	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Phenyl Acetate	Water White Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenyl Chloride (Chlorobenzene)	Clear Volatile Liquid	1	-	-	-	X	-	-	-	-	-	1	-	-	-	-
Phenylenediamine (ortho)	Colorless to Red Solid Needles	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Phorone (Diisopropylidene Acetone)	Yellow Liquid	1	1	-	2	2	X	X	X	X	2	X	X	-	-	-
Phosgene (Carbonyl Chloride)	Gas, Liquid @ 60 PSI @ 120 F	1	X	X	X	X	X	X	X	X	2	1	X	-	-	-
Phosphate Ester Hydraulic Fluid	Liquid	1	1	1	2	X	X	X	X	X	-	-	X	-	2	-
Phosphate Rock	Solid	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Phosphate, Trisodium	In Water	1	1	1	1	-	-	-	-	-	-	1	-	-	-	-
Phosphoric Acid (100%)	Crystals	1	2	X	2	2	-	-	-	-	-	1	-	-	-	-
Phosphoric Acid (35% or less)	Colorless Liquid	1	1	-	1	1	-	-	-	-	-	1	-	-	-	-
Phosphoric Acid (50%)	Colorless Liquid	1	1	1	1	1	2	2	2	2	2	1	1	1	X	X
Phosphoric Acid (75%)	Colorless Liquid	1	2	1	2	2	-	-	-	-	-	1	-	-	-	-
Phosphoric Acid (85%)	Syrupy Liquid	1	2	1	2	2	X	2	2	2	2	1	1	1	X	X

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		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Phosphoric Acid (90%)	Syrupy Liquid	1	2	1	2	2	-	-	-	-	-	1	-	-	-	-
Phosphoric Acid, Spent	Liquid	1	1	-	1	1	-	-	-	-	-	1	-	-	-	-
Photographic, Developers		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Photographic, Emulsions	Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Photographic, Fixing Solutions	Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Phthalic Acid	Colorless Crystals	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Phthalic Acid (50%)	Colorless Liquid	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Phthalic Anhydride, Molten	White Crystalline Solid	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
Picric Acid (Solution)	In Water	1	2	2	2	2	-	-	-	-	-	1	-	-	-	-
Picric Acid (Trinitrophenol)	Yellow Crystals	1	2	2	2	2	2	2	2	2	2	1	2	-	X	1
Pine Oil	Colorless to Amber Liquid	1	1	-	-	X	2	X	X	-	X	2	X	2	-	-
Pine Tar	Viscous Brown to Black Liquid	1	2	-	-	-	-	-	-	-	-	1	-	-	-	-
Pinene	Colorless Transparent Liquid	1	1	-	2	X	2	X	X	X	X	1	-	2	1	X
Piperazine Hydrochloride Solution (34%)	In Water	1	1	-	-	-	2	-	-	-	-	-	-	-	-	-
Pitch	In Aromatic Hydrocarbons	1	2	X	X	X	2	X	X	X	X	1	X	-	1	X
Plating Solution (Chrome Under 120 deg F)	Liquid	1	1	-	-	2	-	-	-	-	2	2	-	-	X	X
Pluronic (Block Polymer with Hydroxyl by BASF)	Liquid	1	1	1	1	1	-	-	-	-	-	1	-	-	-	-
Polyester Plastic		1	1	-	-	-	-	-	-	-	-	2	-	-	2	-
Polyethylene Glycol	Colorless Liquid to glassy Solid	1	-	-	-	1	2	-	1	1	1	1	1	-	2	2
Polyethylene Plastic	Solid Beads	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Polypropylene Glycol	Liquid	1	1	-	1	1	1	-	1	1	1	1	1	-	-	-
Polypropylene Plastic	Solid Beads	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Polystyrene Plastic	Solid Beads	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Polyurethane Foam (Under 125 deg F)		1	1	-	1	2	-	-	-	-	2	2	-	-	-	-
Polyvinyl Acetate - Emulsions		1	1	-	1	1	1	-	1	2	1	-	1	-	-	-
Potash (Potassium Carbonate) Aqueous Solution	Liquid	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-
Potassium Acetate	White Powder	1	1	-	1	2	2	2	2	2	2	X	2	1	-	1
Potassium Bicarbonate	Colorless crystal or white Powder	1	1	-	1	1	1	1	1	1	1	1	1	-	1	1
Potassium Bisulphate	Colorless crystal	1	1	-	1	1	1	1	1	1	1	1	1	1	-	1
Potassium Bromate	White Crystal or Powder	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Potassium Bromide	White Crystals or Powder	1	1	-	1	1	1	1	1	1	1	1	1	-	1	1
Potassium Carbonate	White granular Powder	1	1	-	1	1	1	1	1	1	1	1	1	1	1	1
Potassium Carbonate, Liquid	Colorless to Cloudy Liquid	1	1	-	1	1	1	1	1	1	1	1	1	-	1	1
Potassium Chlorate	Colorless to white Powder	1	-	-	-	-	-	-	-	-	-	-	-	-	2	1
Potassium Chloride	Colorless to white Solid	1	1	-	1	-	-	-	-	-	-	-	-	1	1	1
Potassium Chloride, Dry	White Solid	1	1	-	1	1	1	1	1	1	1	1	1	-	1	1
Potassium Chromate	Yellow Crystal	1	2	-	-	2	X	X	X	2	2	1	2	1	2	1
Potassium Cuprocyanide	White Crystalline Solid	1	-	-	-	1	1	1	1	1	1	1	1	-	2	1
Potassium Cyanide	White Crystal	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Potassium Dichromate	White Crystalline Powder	1	-	-	-	-	-	-	-	-	-	-	-	1	2	1
Potassium Ferrocyanide	Yellow Crystal or Powder	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Potassium Fluoride	White Crystalline Powder	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Potassium Hydrate	White Solid	1	-	-	-	2	2	2	2	2	1	X	1	-	2	2
Potassium Hydroxide (30% Caustic Potash)	Colorless to Cloudy Liquid	1	1	-	1	-	-	-	-	-	-	2	-	1	-	-
Potassium Hydroxide, Liquid	Colorless to Cloudy Liquid	1	1	-	1	1	2	2	2	2	1	X	2	-	X	X

# Fluid Resistance Data For Common Gasket And Seal Elastomers

Rating Legend: 1 = Excellent , 2 = Good , X = NOT RECOMMENDED , - = Insufficient Information

Chemical Name	Common Form	CAUTION: All ratings contained in this data are ment as guidelines ONLY! This does not warrant or guarantee any of the elastomers listed for any application. Testing under actual conditions is always recommended. WARNING: The use of the wrong gasket, seal, or hose liner could lead to a leak, loss of products or emmissions to the environment.														
		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Potassium Iodide	White Solid	1	-	-	-	1	1	-	-	1	-	1	1	-	1	
Potassium Nitrate	Colorless to white Solid	1	-	-	-	-	-	-	-	-	-	-	-	1	1	1
Potassium Permanganate	Dark purple Crystal	1	-	-	-	-	-	-	-	-	-	-	-	X	X	
Potassium Persulfate	White Crystal	1	-	-	-	-	-	-	-	-	-	-	-	-	1	
Potassium Phosphate	Colorless to white Crystal	1	-	-	-	1	-	-	-	1	-	1	1	-	-	-
Potassium Silicate, Other Than Dry		1	1	-	1	1	1	2	-	1	-	1	-	-	-	-
Potassium Sulfate	White Crystal or Powder	1	1	-	1	-	-	-	-	-	-	-	-	1	1	1
Potassium Sulfide	Red or yellow Crystal or Solid	1	1	-	1	1	1	-	-	1	1	1	2	-	-	-
Potassium Sulfite	White Crystal or Powder	1	-	-	-	-	-	-	-	-	-	-	-	1	-	2
Potassium Thiosulfate	Colorless crystal	1	-	-	-	1	-	-	-	1	-	1	1	-	-	1
Primatol A, S, P (Ag Spray)	Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Propane Gas	Colorless Gas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Propanediol	Colorless Liquid	1	1	-	1	1	1	-	-	X	1	1	2	-	-	-
Propanol (Propyl Alcohol)	Colorless Liquid	1	1	1	1	1	-	-	-	-	1	1	-	1	1	2
Propionic Acid	Colorless Oily Liquid	1	1	1	1	2	X	2	2	X	2	1	2	-	-	-
Propyl Acetate	Colorless Liquid	1	1	1	1	-	-	-	-	-	-	X	-	2	-	-
Propyl Alcohol (Propanol)	Colorless Liquid	1	1	1	1	1	-	-	-	-	1	1	-	1	1	2
Propyl Aldehyde	White-water Liquid	1	2	-	2	-	X	-	X	-	2	X	X	-	-	-
Propyl Chloride	Colorless Liquid	1	2	-	1	-	X	-	X	-	X	2	X	-	-	-
Propylene	Colorless Gas	1	1	-	1	X	X	X	X	X	X	1	X	-	-	-
Propylene Diamine	Colorless Liquid	1	2	-	2	-	2	-	2	-	2	-	X	-	-	-
Propylene Dichloride (Dichloropropane)	Colorless Liquid	1	2	-	2	X	X	X	X	X	X	2	X	-	-	-
Propylene Glycol	Liquid	1	1	-	1	1	1	1	1	1	1	1	1	1	2	1
Propylene Oxide	Colorless Liquid	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Purina Insecticide		1	1	-	1	2	X	-	-	X	2	2	-	-	2	-
Puopale RX Oils	Liquid	1	1	-	2	X	1	-	-	-	X	-	-	-	1	2
Pydraul 10E, 29E-LT, 30E, 60, 65E, 115SE	Liquid	1	1	-	2	2	X	-	-	-	2	-	-	2	-	X
Pydraul 135	Liquid	1	1	-	2	-	X	-	-	-	2	1	-	2	2	-
Pydraul 150	Liquid	1	1	-	2	2	X	X	X	X	2	1	X	2	2	X
Pydraul 280	Liquid	1	1	-	2	2	X	X	X	X	2	2	X	2	2	X
Pydraul 312	Liquid	1	1	-	2	X	X	X	X	X	X	1	-	2	1	X
Pydraul 50E	Liquid	1	1	-	2	2	-	-	-	-	2	2	-	2	1	X
Pydraul 540	Liquid	1	1	-	2	X	X	X	X	X	X	1	X	2	X	X
Pydraul 625	Liquid	1	1	-	2	2	X	X	X	X	2	1	X	2	2	X
Pydraul A-200	Liquid	1	1	-	2	X	X	X	X	X	X	1	X	2	2	X
Pydraul F-9	Liquid	1	2	-	2	2	X	X	X	X	2	1	X	2	2	-
Pyrene (Carbon Tetrachloride)	Colorless Liquid	1	2	-	2	X	X	X	X	X	X	1	X	-	-	X
Pyrethrum	Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Pyridine (50%)		1	2	-	2	-	-	-	-	X	-	X	X	-	-	X
Pyrogard 160, 230, 630	Liquid	1	1	-	2	-	-	-	-	-	-	2	-	-	-	-
Pyrogard 51, 53, 55	Liquid	1	1	-	2	2	X	-	-	-	2	-	-	-	-	-
Pyrogard C, D	Liquid	1	1	-	2	X	1	-	-	-	X	-	-	-	1	2
Pyronal (Transformer Oil)	Liquid	1	1	-	2	-	-	-	-	-	-	1	-	-	-	-

Q

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		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Quenching Oil	Liquid	1	-	-	-	-	2	-	-	2	-	-	-	-	-	-
Quintolubric 822	Liquid	1	1	-	-	2	2	-	-	2	-	1	-	-	-	-
<b>R</b>																
Ramrod (Ag Spray)		1	1	-	1	-	-	-	-	-	-	-	-	1	-	-
Rando Oils	Liquid	1	1	-	2	X	1	-	-	-	X	-	-	-	1	-
Rape Seed Oil	Brownish to yellow Liquid	1	1	-	2	2	-	-	-	-	2	-	X	-	2	-
Red Oil (Commercial Oleic Acid)	Liquid	1	1	-	2	2	2	X	X	2	2	2	2	1	1	-
Refined Wax (Petroleum)		1	1	-	1	-	1	X	X	2	-	1	-	-	1	-
Regal Oils R&O	Liquid	1	1	-	1	X	1	-	-	-	X	-	-	-	1	2
Richfield "A" Weed Killer		1	1	-	1	X	2	X	X	X	X	2	X	-	-	2
Road Paving Compound		-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
Road Tar		-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
Rubilene Oils	Liquid	1	1	-	1	X	1	-	-	-	X	-	-	-	1	2
<b>S</b>																
Salicylic Acid	White Powder	1	1	1	1	2	X	2	2	-	2	2	-	-	1	1
Salt Water (Sea Water)	Liquid	1	1	-	1	1	2	1	1	2	1	1	2	-	1	1
Sauerkraut		1	-	-	1	-	-	-	-	-	-	-	-	-	-	2
Sea Water	Colorless Liquid	1	1	-	1	1	2	2	X	2	1	1	1	-	-	-
Sevin		1	2	-	2	2	-	-	-	-	-	-	-	-	1	-
Sewage	Sludge	1	1	1	1	-	2	2	X	2	-	-	2	1	1	2
Shampoo	Liquid	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-
Shellac	Orange to colorless flake	1	-	X	-	-	-	-	-	-	-	-	-	-	1	-
Shortening		1	-	-	-	X	1	-	-	-	-	-	-	-	-	-
Silicate of Soda	Brownish or yellow Liquid	1	1	-	1	1	1	-	1	1	1	1	1	-	-	-
Silicone Greases	Liquid	1	2	-	2	-	2	-	-	2	-	2	2	-	1	2
Silicone Oils	Liquid	1	2	-	2	-	2	-	-	2	-	2	2	-	1	2
Silver Cyanide	White Powder	1	1	-	-	-	-	-	-	1	-	-	-	-	-	1
Silver Nitrate	Colorless crystal	1	1	-	-	1	1	1	1	1	1	1	1	1	1	2
Skydrol 500A & 7000	Liquid	1	1	-	1	1	X	X	X	X	2	X	X	2	1	X
Soap Oil	Liquid	1	1	2	1	-	X	-	-	X	-	-	X	-	-	-
Soap Solutions	Liquid	1	1	1	1	1	1	X	X	2	1	1	1	1	1	1
Soap, Liquid	Liquid	1	1	-	1	1	1	2	2	1	2	1	1	-	2	2
Soda Ash (Sodium Carbonate)	Grayish Powder	1	1	-	1	1	1	1	1	1	1	1	1	1	1	1
Soda Water	Liquid	1	-	-	1	-	-	-	-	-	-	-	-	-	1	1
Sodium Acetate	Colorless crystal	1	1	-	1	2	X	2	2	X	2	X	X	1	1	1
Sodium Aluminate Solution	Colorless to cloudy Liquid	1	1	-	1	1	1	2	2	1	1	1	1	-	2	2
Sodium Benzoate	White Crystals or Powder	1	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Sodium Bicarbonate	White Crystal or Powder	1	1	-	1	1	1	1	1	1	1	1	1	1	1	1
Sodium Bichromate Solution	Red to clear Liquid	1	1	-	1	1	2	2	2	2	1	1	2	-	2	2
Sodium Bisulfate (Niter Cake)	Colorless Crystals to White Lumps	1	1	-	1	1	1	1	1	1	1	1	1	1	1	1
Sodium Bisulfite	White Crystals or Powder	1	1	-	1	1	1	1	1	1	1	1	1	1	1	1
Sodium Borate (Borax)	White Crystals	1	1	-	1	1	1	1	1	1	1	1	1	1	1	1
Sodium Carbonate (Soda Ash)	Grayish Powder	1	1	-	1	1	1	1	1	1	1	1	1	1	1	1

# Fluid Resistance Data For Common Gasket And Seal Elastomers

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		Teflon	Gatron (XLPE)			Santoprene	Ethylene Propylene Diene (EPDM)	Nitrile / Buna-N / NBR	Styrene Butadiene	Natural Rubber	Neoprene	Butyl	Fluorocarbon	Hypalon	Chlorinated Polyethylene	Nylon	Polyvinyl Chloride
		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC	
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G	
Sodium Chlorate	Colorless Crystals	1	-	-	-	1	1	1	1	2	2	1	1	-	1	1	
Sodium Chloride	Colorless to white Crystals	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Chlorite Solution	Colorless to cloudy Liquid	2	-	-	-	X	X	2	2	X	2	X	2	-	X	2	
Sodium Chromate	Yellow, translucent Crystals	1	-	-	-	-	1	2	2	1	2	1	X	-	2	2	
Sodium Cyanide	In Water	1	1	-	-	1	1	1	1	1	1	1	1	1	1	1	
Sodium Cyanide	White Crystalline Powder	1	1	-	-	1	1	1	1	1	1	1	1	1	1	1	
Sodium Dichromate	Red to red-orange Crystals	1	-	-	-	1	1	2	2	2	1	1	2	1	-	1	
Sodium Ferricyanide	Ruby-red Crystals	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Sodium Ferrocyanide	Yellow, transparent Crystals	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Sodium Fluoride (70%)	White Liquid	1	1	1	-	2	-	2	2	-	2	-	-	-	-	1	
Sodium Hydrate	White Solid	1	2	-	2	1	2	2	2	2	2	2	2	-	2	2	
Sodium Hydrochlorite	Pale greenish Liquid	1	2	-	2	2	X	2	X	X	2	1	1	-	2	2	
Sodium Hydrosulfide	Colorless needles	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Sodium Hydrosulfite	Lemon colored Powder or flake	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
Sodium Hydroxide (10%)	White Liquid	1	1	1	1	-	-	-	-	-	-	1	-	1	-	-	
Sodium Hydroxide (40%)	White Liquid	1	1	1	1	2	2	1	1	1	2	1	1	1	X	-	
Sodium Hydroxide (50%) Under 212 deg F	White Liquid	1	1	2	1	2	-	-	-	-	-	X	-	-	-	-	
Sodium Hydroxide (50%, Under 115 deg F)	White Liquid	1	1	2	1	2	X	1	1	2	1	X	1	1	X	-	
Sodium Hydroxide (50%, Under 180 deg F)	White Liquid	1	1	2	1	2	X	X	X	2	2	X	2	1	X	-	
Sodium Hydroxide (60%)	White Liquid	1	1	1	1	2	X	2	2	2	2	X	2	1	X	-	
Sodium Hydroxide Solution 25%	White deliquescent Liquid	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	
Sodium Hypochlorite (20%)	White Liquid	1	1	1	1	1	X	X	X	X	-	X	1	1	2	1	
Sodium Hypochlorite (5%)	White Liquid	1	1	1	1	1	X	X	X	-	-	1	1	1	1	1	
Sodium Hyposulfate	Large, transparent Crystals	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Sodium Metallic	Silver Solid	2	-	-	-	1	2	-	-	-	-	-	-	-	-	-	
Sodium Metaphosphate	Colorless Crystals to white Powder	1	1	-	-	2	2	2	2	2	2	2	2	1	1	1	
Sodium Nitrate	Colorless crystal	1	1	-	-	2	X	X	X	X	2	-	2	1	1	1	
Sodium Perborate	White, amorphous Powder	1	1	-	-	2	X	X	X	X	2	-	X	-	2	-	
Sodium Peroxide	Yellowish white Powder	1	1	2	-	-	-	-	-	1	1	1	1	2	X	1	
Sodium Phosphate	Colorless Crystals to white Powder	1	1	-	-	2	-	2	2	X	2	-	-	1	1	1	
Sodium Silicate	Lumps of greenish glass	1	1	-	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Sulfate	White Crystals or Powder	1	1	-	-	1	1	2	2	1	1	1	1	1	1	1	
Sodium Sulfate Decahydrate (Glauber's Salt)	Crystals or Powder	1	-	-	-	1	-	1	1	-	-	-	-	-	-	-	
Sodium Sulfhydrate	Colorless to cloudy Liquid	1	2	-	-	1	2	X	2	2	2	2	2	-	2	2	
Sodium Sulfide	Yellow/Brick red flakes or Crystals	1	1	-	-	1	1	2	2	1	1	1	1	1	1	1	
Sodium Sulfide Solution	Colorless to cloudy Liquid	1	2	-	-	1	2	-	2	2	1	2	2	-	X	-	
Sodium Sulfite	White Crystals or Powder	1	1	-	-	2	2	2	2	2	2	-	2	1	1	1	
Sodium Sulfite Solution	Colorless to cloudy Liquid	1	2	-	-	1	2	-	2	2	1	2	2	-	X	-	
Sodium Sulphydrate	Colorless needles	1	2	-	-	1	2	-	-	2	1	2	2	-	2	2	
Sodium Thiocyanate Solution	Colorless to cloudy Liquid	1	1	-	-	1	1	2	-	1	2	1	2	-	-	-	
Sodium Thiosulfate (HPO)	White Powder	1	1	-	1	-	1	1	1	1	1	-	1	1	1	1	
Sodium Tripolyphosphate (STPP)	White Powder	1	2	-	2	-	-	-	-	-	2	X	-	-	-	-	
Solnus Oils	Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	1	1	
Sour Crude Oil	Liquid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	
Soybean Oil	Pale yellow oil	1	1	1	2	X	2	X	X	2	2	1	2	-	1	2	

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		Teflon	Gatron (XLPE)	Ultra High Molecular Polyethylene	Santoprene	Ethylene Propylene Diene (EPDM)	Nitrile / Buna-N / NBR	Styrene Butadiene	Natural Rubber	Neoprene	Butyl	Fluorocarbon	Hypalon	Chlorinated Polyethylene	Nylon	Polyvinyl Chloride
		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Spent Acid	Liquid	1	2	2	2	X	X	X	X	X	X	1	2	X	X	X
Stannic Chloride	Colorless, fuming Liquid	1	1	-	2	-	2	2	2	X	X	1	X	1	X	2
Stannic Sulfide	Yellow to brown Powder	1	2	-	2	-	2	-	2	-	2	-	2	-	-	-
Stannous Chloride (Under 150 deg F)	White Mass	1	1	-	1	2	1	1	1	1	1	1	1	1	X	1
Starch	White amorphous Powder	1	1	-	1	1	2	1	1	2	-	1	1	-	1	1
Starch gum (Dextrin)	Yellow or White Powder	1	1	-	1	1	1	-	-	1	X	1	-	-	1	1
Stauffer Jet 1	Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Stauffer Jet 2	Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Steam	Gas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stearic Acid (Octadecanoic Acid)	Colorless Waxy Solid	1	1	1	1	2	2	2	2	2	2	1	2	1	1	1
Stearin	Colorless crystal or Powder	1	-	-	-	-	-	-	-	-	-	-	-	-	2	-
Stoddard Solvent	Clear petroleum distillate	1	2	-	2	X	2	X	X	-	X	1	-	1	1	2
STPP (Sodium Tripolyphosphate)	White Powder	1	2	-	2	-	-	-	-	-	2	X	-	-	-	-
Straight Synthetic Oils	Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	1	2
Styrene (Monomer)	Colorless Oily Liquid	1	2	-	2	X	X	X	X	-	X	2	-	2	2	-
Sucrose Solutions	Liquid	1	1	-	1	-	1	1	1	1	1	-	1	-	-	-
Sugar, Liquid, Blended	Liquid	1	1	-	1	1	1	1	1	1	1	1	2	-	-	-
Sugar, Syrup	Liquid	1	1	-	1	1	1	1	1	1	1	1	2	-	-	-
Sulfamic Acid	In Water	1	1	1	1	2	X	X	X	-	2	1	2	1	X	X
Sulfamic Acid (10% Under 170 deg F)	Colorless Liquid	1	X	-	-	-	-	X	X	-	-	2	2	1	-	-
Sulfate Liquors (Under 150 deg F)		1	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Sulfur (Under 200 deg F)	Yellow Crystals	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfur Chloride	Yellow Oily Liquid	1	2	-	2	X	X	X	X	X	X	1	2	-	2	2
Sulfur Dioxide	Colorless Gas or Liquid	-	-	-	1	2	X	X	-	-	2	X	-	-	-	-
Sulfur Dioxide (Dry)		1	2	-	2	2	X	X	X	X	X	1	2	-	X	1
Sulfur Dioxide (Liquid)	Colorless Liquid	1	-	-	2	1	X	X	X	2	2	X	2	-	-	X
Sulfur Dioxide (Moist)		1	-	-	2	1	X	X	X	2	1	2	2	-	-	X
Sulfur Hexafluoride (Gas)	Colorless Gas	1	1	-	-	1	2	2	2	1	1	2	2	-	1	2
Sulfur Trioxide (Dry)	Solid	1	2	-	-	2	X	X	X	X	X	1	X	X	-	1
Sulfuric Acid (10%)	Colorless Water Solution	1	1	1	1	1	2	1	1	1	1	1	1	1	X	-
Sulfuric Acid (100%)	Colorless Liquid	2	X	X	X	2	X	X	X	X	X	2	X	X	-	-
Sulfuric Acid (30%)	Colorless Water Solution	1	1	1	1	1	2	2	2	1	1	1	1	1	X	-
Sulfuric Acid (50%)	Colorless Water Solution	1	1	1	1	1	X	X	X	2	1	1	1	1	X	-
Sulfuric Acid (60%) (48.5 deg Baume)	Colorless Liquid	1	1	1	1	1	X	X	X	X	1	1	1	1	X	-
Sulfuric Acid (75%)	Colorless to Brown Solution	1	1	1	1	2	X	X	X	X	2	1	2	2	X	-
Sulfuric Acid (88%) (64.7 deg Baume)	Colorless Liquid	1	1	1	1	X	X	X	X	X	X	1	X	X	X	-
Sulfuric Acid (93%) (66 deg Baume)	Colorless to Brown Oily Liquid	1	1	1	1	X	X	X	X	X	X	1	X	X	X	-
Sulfuric Acid (96%)	Colorless Liquid	1	2	1	1	X	X	X	X	X	X	1	X	X	X	-
Sulfuric Acid (98%)	Colorless to Brown Oily Liquid	1	2	X	1	X	X	X	X	X	X	1	X	X	X	-
Sulfuric Acid, Fuming (Oleum)	Colorless to Dark Brown Oily Liquid	1	X	X	X	X	X	X	X	X	X	1	X	X	X	X
Sulfurous Acid (10%)	Colorless Liquid	1	1	1	1	1	X	X	X	-	2	1	1	1	-	1
Sulfurous Acid (75%)	Colorless Liquid	1	1	1	1	1	X	X	X	X	X	1	1	1	X	-
Sun R&O Oils	Liquid	1	1	-	-	X	1	-	-	-	X	1	-	-	1	2
Suntac HP Oils	Liquid	1	1	-	-	X	1	-	-	-	X	1	-	-	1	2
Suntac WR Oils	Liquid	1	1	-	-	X	1	-	-	-	X	1	-	-	1	2

# Fluid Resistance Data For Common Gasket And Seal Elastomers

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		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Sunvis Oils 700, 800, 900	Liquid	1	1	-	X	X	1	-	-	-	X	1	-	-	1	2
Synthetic Oil (Citgo)	Liquid	1	1	-	1	X	-	-	-	-	X	-	-	-	1	2
Syrup	Viscous Liquid	1	1	-	1	-	-	1	1	2	-	1	-	-	-	-
<b>T</b>																
Tall Oil	Black liquid	1	2	-	X	X	1	X	X	X	X	2	X	-	-	X
Tall Oil (Under 150 deg F)	Liquid	1	1	-	2	X	2	X	X	2	X	1	X	-	-	-
Tallow	White to clear Solid or Liquid	1	1	-	2	2	2	-	-	2	2	-	-	-	1	2
Tannic Acid	Faint Yellow Powder	1	1	1	1	1	X	2	2	2	1	1	2	1	1	1
Tannic Acid (10 %)	Yellow Liquid	1	1	-	1	-	X	2	2	2	X	1	2	1	1	1
Tar (Bituminous Under 100 deg F)		1	1	2	X	X	2	X	X	2	X	1	-	X	-	-
Tar Oil	Yellow to dark brown Liquid	1	-	-	X	-	-	-	-	-	-	-	-	-	1	2
Tartaric Acid	White Crystalline Powder	1	1	1	1	1	2	2	2	2	1	1	1	1	-	-
TEA (Triethanolamine)	Colorless Viscous Liquid	1	1	-	1	1	2	2	2	2	2	X	2	1	-	2
TEL (Tetraethyl Lead)	Colorless Oily Liquid	1	2	-	2	-	-	-	-	-	-	-	-	-	2	-
Tellus Oils	Liquid	1	1	-	-	X	1	-	-	-	X	1	-	-	1	2
Tenol Oils	Liquid	1	1	-	-	X	1	-	-	-	X	1	-	-	1	2
Tergitol (Ethoxylates and Ethoxysulfates of Alcohol)		1	2	-	3	-	-	-	-	-	-	-	-	-	-	-
Terpineol	Colorless Liquid or Crystal	1	1	-	2	-	-	X	X	-	X	-	2	1	2	2
Tertiary Butyl Alcohol	Colorless Liquid or Crystal	1	2	-	2	-	2	-	-	-	-	1	-	-	-	-
Tetrachlorobenzene	White Crystal	1	-	-	-	-	-	-	-	-	-	2	-	-	-	-
Tetrachloroethane (Acetylene Tetrachloride)	Colorless Liquid (bp 146 C)	1	X	2	X	X	-	X	X	-	X	1	-	X	1	X
Tetrachloroethylene	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Tetrachloromethane	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Tetrachloronaphthalene	Oily Liquid to Crystalline Solid	1	-	-	-	-	-	-	-	-	-	2	-	-	-	-
Tetradecanol	White Solid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetraethyl Lead (TEL)	Colorless Oily Liquid	1	2	-	2	-	-	-	-	-	-	-	-	-	2	-
Tetraethylene Glycol	Colorless Liquid	1	2	-	2	-	2	-	2	-	1	2	2	-	-	-
Tetrahydrofuran (THF)	Colorless Liquid	1	-	-	X	2	X	X	X	X	2	1	X	-	1	X
Tetrahydroxydicyclopentadiene (JP 10)		-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Tetralin	Colorless Liquid	1	-	-	X	X	X	X	X	X	X	1	X	-	2	-
Theobromo Oil (Cocoa Butter)	Liquid above 95 F	1	1	2	2	-	2	X	X	2	-	-	-	-	-	-
THF (Tetrahydrofuran)	Colorless Liquid	1	-	-	X	2	X	X	X	X	2	1	X	-	1	X
Thiopen		1	-	-	-	X	X	X	X	X	2	2	-	-	-	-
Tin Tetrachloride	Colorless Liquid	1	-	-	-	-	2	-	2	X	-	-	2	-	-	-
Titanium Tetrachloride	Colorless Liquid	1	-	-	-	X	X	-	-	X	X	2	-	-	-	-
Toluene (Toluol) (Methyl Benzene)	Colorless Liquid	1	2	2	X	X	X	X	X	X	X	1	X	X	1	X
Toluene Diisocyanate (Hylene)	Yellow Liquid	1	2	-	2	2	X	X	X	X	2	X	X	-	-	-
Toluene Diisocyanate (Isocyanate)	Water White to Yellow Liquid	1	2	-	2	X	X	X	X	X	X	1	-	-	-	-
Toluidine	Yellow Liquid or White Crystal	1	-	-	-	-	X	-	X	-	X	2	X	-	-	-
Toluol (Toluene)	Colorless Liquid	1	2	2	X	X	X	X	X	X	X	1	X	X	1	X
Transformer Oil (Askarel Types)	Liquid	1	2	-	-	X	X	X	X	X	X	1	X	1	-	-
Transformer Oil (Petroleum Type)	Liquid	1	1	-	-	X	1	X	X	2	X	1	X	1	1	2
Transmission Fluid (Type A)	Liquid	1	1	-	-	X	1	X	X	2	X	1	-	1	2	-
Tributoxyethyl Phosphate	Yellow Liquid	1	1	X	-	2	X	X	X	-	2	-	X	X	2	-

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		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
		Teflon	Gatron (XLPE)	Ultra High Molecular Polyethylene	Santoprene	Ethylene Propylene Diene (EPDM)	Nitrile / Buna-N / NBR	Styrene Butadiene	Natural Rubber	Neoprene	Butyl	Fluorocarbon	Hypalon	Chlorinated Polyethylene	Nylon	Polyvinyl Chloride
Tributyl Phosphate	Colorless Liquid	1	1	X	-	X	X	X	X	X	X	1	X	2	-	-
Tricalcium Aluminate (Calcium Aluminate)	Crystals or Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Trichlorobenzene	White Crystal or colorless Liquid	1	-	-	-	-	X	X	X	X	X	2	X	-	-	-
Trichloroethane 1,1,1 (Methyl Chloroform)	Colorless Liquid	1	-	-	X	X	X	X	X	X	X	1	X	X	X	X
Trichloroethylene	Colorless Liquid	1	1	X	X	X	X	X	X	X	X	1	X	2	2	-
Trichloropropane	Colorless Liquid	1	-	-	-	-	2	-	X	2	X	1	X	-	-	-
Tricresyl Phosphate	Colorless Liquid	1	-	X	-	1	X	X	X	X	2	1	X	1	1	-
Triethanolamine (TEA)	Colorless Viscous Liquid	1	1	-	1	1	2	2	2	2	2	X	2	1	-	2
Triethylamine	Colorless Liquid	1	-	-	-	2	2	X	X	-	X	2	-	-	-	-
Triethylene Glycol	Colorless Liquid	1	-	-	-	-	2	-	2	-	2	2	2	-	-	-
Trihydroxybenzoic Acid (Gallic Acid)	In Alcohol or Glycerol	1	1	1	1	1	X	2	2	X	2	1	-	1	X	X
Trimethyl Phosphite	Colorless Liquid	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
Trimethylbenzene (Mesitylene)	Liquid	1	-	-	X	X	X	X	X	X	X	1	-	-	1	X
Trinitrophenol (Picric Acid)	Yellow Crystals	1	2	2	2	2	2	2	2	2	2	1	2	-	X	1
Trioctyl Phosphate	Liquid	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
Triphenyl Phosphate	Colorless Powder	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
Tripolyphosphate (STPP), (Sodium)	White Powder	1	2	-	2	2	-	2	2	-	2	-	-	-	-	-
Trisodium Phosphate (TSP)	Colorless crystal	1	-	-	-	1	2	2	X	2	2	1	X	-	-	-
Tung Oil	Yellow drying oil	1	2	-	2	-	2	X	X	2	2	1	2	-	-	-
Turpentine	Liquid oil	1	X	-	X	X	2	X	X	X	X	1	X	2	1	1
<b>U</b>																
Ucon Hydrolube Types 150CP, 200CP	Liquid	1	1	-	-	1	1	-	-	-	1	-	-	-	1	2
Ucon Hydrolube Types 275CP, 300CP, 550CP	Liquid	1	-	-	-	-	1	X	X	-	X	1	-	-	2	2
Ucon M1	Liquid	1	1	-	-	1	1	-	-	-	1	-	-	-	1	2
Undecanol (Undecyl Alcohol)	Colorless Liquid	1	-	-	-	-	1	-	2	-	-	2	2	-	-	-
Undecyl Alcohol (Undecanol)	Colorless Liquid	1	-	-	-	-	1	-	2	-	-	2	2	-	-	-
Union Hydraulic Tractor Fluid	Brown Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	1	2
Urea Solution	Liquid	1	1	-	1	-	2	1	1	1	2	-	1	1	1	2
<b>V</b>																
Varnish	Liquids	1	2	-	X	X	X	X	X	X	X	2	X	-	1	-
Vegetable Oils	Liquids	1	-	1	2	2	-	X	X	2	X	-	1	1	1	2
Versilube F-50, F-44	Liquid	1	-	-	-	2	2	2	2	2	2	1	2	-	1	2
Vinegar	Brownish to colorless Liquid	1	1	-	1	-	X	2	2	2	2	1	X	2	-	1
Vinyl Acetate	Colorless Liquid	1	1	-	2	X	X	X	X	X	2	X	X	1	-	-
Vinyl Chloride (Monomer)	Colorless Gas	1	2	-	2	X	X	X	X	X	X	2	X	X	-	X
Vinyl Fluoride	Colorless Gas	1	1	-	2	-	-	-	-	-	-	1	-	-	-	-
Vinyl Trichloride (Trichloroethane)	Colorless Liquid	1	-	-	X	X	X	X	X	X	X	1	X	X	X	X
Vitrea Oils	Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	1	2
VM&P Naptha (Mineral Spirits)	Colorless Liquid	1	1	-	2	X	1	X	X	-	X	1	X	-	1	-
<b>W</b>																
Waste Paint	Liquid to semi-Solid paste	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Water	Liquid	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1



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		Teflon	Gatron (XLPE)	Ultra High Molecular Polyethylene	Santoprene	Ethylene Propylene Diene (EPDM)	Nitrile / Buna-N / NBR	Styrene Butadiene	Natural Rubber	Neoprene	Butyl	Fluorocarbon	Hypalon	Chlorinated Polyethylene	Nylon	Polyvinyl Chloride
		TF	GA	UMHW	SA	EP	BU	SBR	NR	NEO	BT	VI	HY	CPE	NY	PVC
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G
Chemical Name	Common Form															
Water (Brine)	Liquid	1	1	-	1	2	1	1	2	1	1	1	-	1	1	
Water (Deionized)	Liquid	1	-	1	1	-	-	-	-	-	-	-	-	-	-	
Water (Distilled)	Liquid	1	1	1	1	1	1	1	2	1	1	1	-	1	1	
Water (Potable)	Liquid	1	1	1	1	1	1	1	1	-	1	1	-	1	1	
Water Glycols	Liquid	1	-	1	1	-	-	-	-	-	-	-	-	1	1	
Water in Oil Emulsions	Liquid	1	-	1	2	-	-	-	-	-	-	-	-	1	1	
White & Bagley No. 2190 Cutting Oil	Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wines	Liquid	1	2	-	1	X	X	X	X	X	1	X	1	1	-	
Wood Oil	Liquid	1	1	-	-	X	1	X	X	2	X	1	2	1	1	
<b>X</b>																
Xylene (Dimethylbenzene)	Colorless Liquid (mp 56 F)	1	X	X	X	X	X	X	X	X	1	X	X	X	X	
Xylenol (Dimethylphenol)	White solid, liquid @ 68-169 F	1	1	-	2	-	-	-	-	-	1	-	-	-	-	
<b>Z</b>																
Zeric		1	1	-	-	X	1	-	-	-	X	-	-	-	2	
Zinc Acetate	White Crystal	1	1	-	1	2	X	2	2	X	2	X	X	-	X	
Zinc Chloride Solutions	Colorless to cloudy Liquid	1	1	-	1	-	1	2	2	1	2	1	1	1	2	
Zinc Chromate	Yellow Solid	1	1	-	-	-	-	-	-	-	-	-	1	-	-	
Zinc Hydrate		1	-	-	-	-	-	-	-	-	-	-	-	-	1	
Zinc Oxide	White or gray Powder	1	-	-	-	-	-	-	-	-	-	-	-	-	1	
Zinc Sulfate Solutions	Colorless to cloudy Liquid	1	1	-	1	2	2	X	X	2	2	-	2	1	2	