CHEMICAL RESISTANCE CHART

Note: Abbreviations:

S = Satisfactory	L = Limited Application	U = Unsatisfactory	N = Not Used

NOTE: ALL CHEMICAL RESISTANCE INFORMATION IS COMPILED BY OUR CHEMICAL ENGINEER/ PHD AND IS COMPILED AS A RECOMMENDATION ONLY!

CHEMICAL RESISTANCE			
MEDIUM	**CONCENTRATION**	**RESISTANCE AT**	
		20 °C (68°F)	**60 °c (140 °F)**
Acetic Acid	100%	S	L
Acetic Acid	10%	S	S
Acetic Acid Anyhdride	100%	S	L
Acetone	100%	L	U
Adipic Acid	Sat. Sol.	S	S
Allyl Alchol	96%	L	U
Aluminum Chloride	Sat. Sol.	S	S
Aluminum Fluoride	Sat. Sol.	S	S
Aluminum Sulfate	Sat. Sol.	S	S
Alum	Sol.	S	S
Ammonia, Aqueous	Dil. Sol.	S	S
Ammonia, Gaseous Dry	100%	S	S
Ammonia, Liquid	100%	S	S
Ammonium Chloride	Sat. Sol.	S	S
Ammonium Fluoride	Sol.	S	S
Ammonium Nitrate	Sat. Sol.	S	S
Ammonium Sulfate	Sat. Sol.	S	S
Ammonium Sulfide	Sol.	S	S
Amyl Acetate	100%	L	U
Amyl Alcohol	100%	L	U
Aniline	100%	S	U
Antimony Trichloride	90%	S	S
Arsenic Acid	Sat. Sol.	S	S
Aqua Regin	HCL-HN033/1	L	U
Barium Carbonate	Sat. Sol.	S	S
Barium Chloride	Sat. Sol.	S	S
Barium Hydroxide	Sat. Sol.	S	S
Barium Sulfate	Sat. Sol.	S	S

CHEMICAL RESISTANCE			
MEDIUM	**CONCENTRATION**	**RESISTANCE AT**	
		20 °C (68°F)	**60 °c (140 °F)**
Benzalcehyde	100%	L	U
Benzene		U	U
Benzoic Acid	Sat. Sol.	S	S
Beer		S	S
Borax (Sodium Tetraborate)	Sat. Sol.	S	S
Boric Acid	Sat. Sol.	S	S
Bromine, Gaseous Dry	100%	L	U
Bromine Liquid	100%	L	U
Butane, Gaseous	100%	U	U
1-Butanol	100%	U	U
Butyric Acid	100%	S	L
Calcium Carbonate	Sat. Sol.	S	S
Calcium Chloride	Sat. Sol.	S	S
Calcium Nitrate	Sat. Sol.	S	S
Calcium Sulfate	Sat. Sol.	S	S
Calcium Sulfide	Dil. Sol.	L	L
Carbon Dioxide, Gaseous Dry	100%	S	S
Carbon Disulfide	100%	L	U
Carbon Monoxide	100%	S	S
Chloracetic Acid	Sol.	S	S
Carbon Tetrachloride	100%	U	U
Chlorine, Aqueous	Sat. Sol.	L	U
Chlorine, Aqueous Solution	Sat. Sol.	L	U
Chloroform	100%	U	U
Chromic Acid	20%	S	L
Chromic Acid	50%	S	L
Citric Acid	Sat. Sol.	S	S
Copper Chloride	Sat. Sol.	S	S
Copper Nitrate	Sat. Sol.	S	S
Copper Sulfate	Sat. Sol.	S	S
Cresylic Acid	Sat. Sol.	U	-
Cyclohexanol	100%	L	U
Cyclohexanone	100%	L	U
Decahydronaphthalene	100%	L	U

Dextrin	Sat.	S	S
CHEMICAL RESISTANCE			
MEDIUM	**CONCENTRATION**	**RESISTANCE AT**	
		20 °C (68°F)	**60 °c (140 °F)**
Diesel Fuel	Sat.	L	U
Diethyl Ether	100%	U	-
Dioctylphtalate	100%	L	U
Dioxane	100%	L	U
Ethanediol	100%	L	U
Ethanol	40%	S	L
Ethyl Acetate	100%	U	U
Ethylene Trichloride	100%	U	U
Ferric Chloride	Sat. Sol.	S	S
Ferric Nitrate	Sat. Sol.	S	S
Ferric Sulfate	Sat. Sol.	S	S
Ferrous Chloride	Sat. Sol.	S	S
Ferrous Sulfate	Sat. Sol.	S	S
Fluorine, Gaseous	100%	U	U
Fluorosilicic Acid	40%	S	S
Formaldehyde	40%	L	L
Formic Acid	50%	S	S
Formic Acid	98%-100%	S	S
Furfuryl Alcohol	100%	L	U
Gasoline	--	L	U
Glacial Acetic Acid	96%	S	S
Glucose	Sat. Sol.	S	S
Glycerine	100%	S	L
Glycol	Sol.	S	S
Heptane	100%	U	U
Hydrobromic Acid	50%	L	L
Hydrobromic Acid	100%	L	L
Hydrobromic Acid	10%	S	S
Hydrobromic Acid	35%	S	S
Hydrochloric Acid	50%	S	L
Hydrocyanic Acid	10%	S	S
Hydrofluoric Acid	4%	S	S
Hydrofluoric Acid	60%	S	L

Hydrogen	100%	S	S
Hydrogen Peroxide	30%	L	L
CHEMICAL RESISTANCE			
MEDIUM	**CONCENTRATION**	**RESISTANCE AT**	
		20 °C (68°F)	**60 °c (140 °F)**
Hydrogen Peroxide	40%	U	U
Hydrogen Sulfide, Gaseous	100%	S	S
Lactic Acid	100%	S	S
Lead Acetate	Sat. Sol.	S	-
Magnesium Carbonate	Sat. Sol.	S	S
Magnesium Chloride	Sat. Sol.	S	S
Magnesium Hydroxide	Sat. Sol.	S	S
Maleic Acid	Sat. Sol.	S	S
Mercuric Chloride	Sat. Sol.	S	S
Mercuric Cyanide	Sat. Sol.	S	S
Mercuric Nitrate	Sol.	S	S
Mercury	100%	S	S
Methanol	100%	S	L
Methylene Chlorine	100%	U	U
Milk	-	S	S
Molasses	-	S	S
Nickel Chloride	Sat. Sol.	S	S
Nickel Nitrate	Sat. Sol.	S	S
Nickel Sulfate	Sat. Sol.	S	S
Nicotinic Acid	Dil. Sol.	S	S
Nitric Acid	15%	U	U
Nitric Acid	50%	U	U
Nitric Acid	75%	U	U
Nitric Acid	100%	U	U
Oil and Grease	-	L	U
Oleic Acid	100%	L	U
Orthophosphoric Acid	50%	S	S
Orthophosphoric	95%	S	L
Oxalic Acid	Sat. Sol.	S	S
Oxygen	100%	S	-
Ozone	100%	L	U
Petroleium (Kerosene)	-	L	U

Phenol	Sol.	L	L
Phosphorus Trichloride	100%	S	L
Potographic Developer	Cust. Conc.	S	S
CHEMICAL RESISTANCE			
MEDIUM	**CONCENTRATION**	**RESISTANCE AT**	
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Pierie Acid	Sat. Sol.	S	-
Potassium Bicarbonate	Sat. Sol.	S	S
Potassium Bisufide	Sol.	S	S
Potassium Bronate	Sat. Sol.	S	S
Potassium Bromide	Sat. Sol.	S	S
Potassium Carbonate	Sat. Sol.	S	S
Potassium Chlorate	Sat. Sol.	S	S
Potassium Chloride	Sat. Sol.	S	S
Potassium Chromate	Sat. Sol.	S	S
Potassium Cyanide	Sol.	S	S
Potassium Dichromate	Sat. Sol.	S	S
Potassium Ferricyanide	Sat. Sol.	S	S
Potassium Ferrrocyanide	Sat. Sol.	S	S
Potassium Fluoride	Sat. Sol.	S	S
Potassium Hydroxide	10%	S	S
Potassium Hydroxide	Sol.	S	S
Potassium Hypochlorite	Sol.	S	L
Potassium Nitrate	Sat. Sol.	S	S
Potassium Orthophosphate	Sat. Sol.	S	S
Potassium Perchlorate	Sat. Sol.	S	S
Potassium Permanganate	20%	S	S
Potassium Persulfate	Sat. Sol.	S	S
Potassium Sulfate	Sat. Sol.	S	S
Potassium Sulfite	Sol.	S	S
Propionic Acid	50%	S	S
Propionic Acid	100%	S	L
Pyridine	100%	U	U
Quinol (Hydroquinone)	Sat. Sol.	S	S
Salicylic Acid	Sat. Sol.	S	S
Silver Cyanide	Sat. Sol.	S	S
Silver Nitrate	Sat. Sol.	S	S

Sodium Benzonate	Sat. Sol.	S	S
Sodium Biphosphate	Sat. Sol.	S	S
Sodium Bisulfite	Sol.	S	S
Sodium Bromide	Sat. Sol.	S	S
CHEMICAL RESISTANCE			
MEDIUM	**CONCENTRATION**	**RESISTANCE AT**	
		20 °C (68°F)	**60 °c (140 °F)**
Sodium Carbonate	Sat. Sol.	S	S
Sodium Chlorate	Sat. Sol.	S	S
Sodium Chloride	Sat. Sol.	S	S
Sodium Ferricyanide	Sat. Sol.	S	S
Sodium Ferrocyanide	Sat. Sol.	S	S
Sodium Fluoride	Sat. Sol.	S	S
Sodium Hydroxide	40%	S	S
Sodium Hydroxide	Sat. Sol.	S	S
Sodium Hypochlorite	15% Active Chlorine	S	S
Sodium Nitrate	Sat. Sol.	S	S
Sodium Nitrite	Sat. Sol.	S	S
Sodium Orthophosphate	Sat. Sol.	S	S
Sodium Sulfate	Sat. Sol.	S	S
Sodium Sulfide	Sat. Sol.	S	S
Sulfur Dioxide, Dry	100%	S	-
Sulfur Trioxide	100%	U	U
Sulfuric Acide	10%	S	S
Sulfuric Acid	50%	S	S
Sulfuric Acid	98%	S	U
Sulfuric Acid	Fuming	U	U
Sulfurous Acid	30%	S	S
Tannic Acid	Sol.	S	S
Tartaric Acid	Sol.	S	S
Thionyl Chloride	!00%	U	U
Toluene	100%	U	U
Triethylamine	Sol.	S	L
Urea	Sol.	S	S
Urine	-	S	S
Water	-	S	S
Wine Vinegar	-	S	S

Wines & Liquors	-	S	S
Xylenes	100%	U	U
Yeast	Sol.	S	S
Zinc Carbonate	Sat. Sol.	S	S
Zinc Chloride	Sat. Sol.	S	S

CHEMICAL RESISTANCE			
MEDIUM	**CONCENTRATION**	**RESISTANCE AT**	
		20 °C (68°F)	**60 °c (140 °F)**
Zinc (II) Chloride	Sat. Sol.	S	S
Zinc (IV) chloride	Sat. Sol.	S	S
Zinc Oxide	Sat. Sol.	S	S
Zinx Sulfate	Sat. Sol.	S	S

Note: Concentrations

Sat. Sol.	Saturated aqueous solution, prepared at 20 °C (68 °F)
Sol.	Aqueous solution with concentration above 10% but below saturation level.
Dil. Sol.	Diluted aqueous solution with concentration below 10%.
Cust. Conc.	Customary service concentration.
(S)	Satisfactory liner material is resistant to given reagent at the given concentration and temperature. No mechanical or chemical degradation is observed.
(L)	Limited application possible. Lower material may reflect some attack. Factors such as concentration, pressure and temperature directly affect liner performance against the given media.
(U)	Unsatisfactory. Liner material is not resistant in the given concentration and temperature.