

Chemical Resistance Tables

Chemical Resistance Ratings	
A	Fluid has little or no effect.
B	Fluid has minor to moderate effect.
C	Fluid has severe effect.
X	No Data - Likely severe effect.
T	No Data - Likely minor effect.
Geomembrane Material Codes	
HDPE	High Density Polyethylene (HDPE)
PVC	Polyvinyl Chloride (PVC)
LLDPE	LLDPE
RPE	Reinforced Polyethylene
PP	Polypropylene
PU	Polyurethane
EIA	Ethylene Interpolymer Alloy (EIA) (Seaman XR-5)

Material	%	HDPE	PVC	LLDPE	RPE	PP	PU	EIA
Acetic Acid	5%	A	A	A	A	A	A	A
Acetic Acid	50%	A	X	A	B	T	X	C
Acetic Acid	Gla.	A	C	A	C	A	X	X
Acetic Anhydride		A	X	C	C	T	X	X
Acetone		A	C	B	C	C	C	X
Alkyl Alcohol			C	A		T	T	T
Alkyl Chloride			C			X	X	X
Aluminum Chloride		A	B	A	A	T	T	T
Aluminum Flouride		A	X	A	A	T	T	T
Aluminum Sulfate		A	A	A	A	T	T	T
Ammonium Carbonate		A	A	A	A	T	T	T
Ammonium Chloride		A	A	A	A	T	T	T
Ammonium Fluoride	20%	A	T	A	A	T	T	T
Ammonium Hydroxide	30%	A	25	A	A	A	T	A
Ammonium Nitrate		A	25	A	A	A	T	T
Ammonium Phosphate		A	T	A		T	T	T
Ammonium Sulphate		A	A	A	A	T	T	B
Ammonium Sulphide		A	22		A	T	T	T
Amyl Acetate		B	C	C	C	C	T	X
Amyl Alcohol		A	T	A	B	T	T	T
Amyl Chloride		B	T	A	C		T	X
Aniline		A	X	B	B	A	X	X
Animal Oil		T	B	A		T		A
Antimony Chloride		A	T		A	A	A	T
Aqua Regia		B	B	C	C	X	X	X
ASTM Fuel A		T	X			C	A	A
ASTM Fuel B		T	C			C	A	B

ASTM Fuel C		T	C			C	B	
ASTM Oil #1		T	T				T	T
ASTM Oil #2		T	X				T	A
ASTM Oil #3		T	X				T	T
Asphalt		A	C	A			T	T
Barium Carbonate		A	T	A	A	T	T	T
Barium Hydroxide		A	T	A	A	T	T	T
Barium Sulphate		A	T	A	A	T	T	T
Benzene	<1%	T	T	B	T	T	T	T
Benzene	25%	T	X	C	X	X	T	T
Benzene	100	B	X	C	X	C	T	C
Benzoic Acid		A	T	A	A	T	T	T
Borax Solutions		A	T	A	A	T	T	T
Boric Acid		A	T	A	A	T	T	T
Bromic Acid	10%	A	T		A	T	X	T
Bromine; Anhydrous		B	X	C	C	X	X	
Butyl Acetate		B	X	B	C	T	X	X
Butyl Alcohol		A	T	A	B	A	T	T

Material	%	HDPE	PVC	LLDPE	RPE	PP	PU	EIA
Butyl Phenol		A	X			T	X	X
Butyric Acid		A	T	C	C	T	X	X
Calcium Bisulphate		A	T	A		T	T	T
Calcium Carbonate		A	A	A	A	A	T	T
Calcium Chloride		A	A	A	A	T	T	T
Calcium Hydroxide		A	T	A	A	T	T	T
Calcium Hypochlorite		A	A	A	A	T	T	A
Calcium Nitrate	50%	A	T	A	A	T	T	T
Calcium Sulphate		A	2%	A	A	T	A	T
Carbon Disulfide		B	X	C	C	C	X	X
Carbon Tetrachloride		C	C	C	C	C	C	X
Carbonic Acid		A	T	A	A	C	T	T
Castor Oil		A	X	A	B	T	T	T
Chlorine Gas		C	X	X	C	X	X	T
Chloroacetic Acid		A	X	A	A	X	X	X
Chlorobenzene		B	C	C	C	X	X	X
Chloroform		C	C	C	C	X	X	X
Chlorosulfonic Acid		C	C	C	C	X	X	X
Chrome Alum		A	T		A	T	T	T
Chromic Acid	30%	A	T	A	A	X	X	B
Chromium Trioxide		A	T			X	X	
Citric Acid		A	A	A	B	T	T	T
Copper Chloride		A	T	A	A	T	T	T
Copper Nitrate		A	T	A	A	T	T	T
Copper Sulphate		A	T	A	A	T	T	T
Corn Oil		A	C	A	A	T	T	A
Cottonseed Oil		A	C	A	B	T	T	A

Crude Oil		T	C	B			T	T
Cyclohexane		C	X	C		X	T	
Cyclohexanol		A	X	C	B	T	T	
Cyclohexanone		C	C	C	C	A	X	X
Dextrin		A	T	A	A	T	T	T
Dibutyl Phthalate		B	X	B	B		X	C
Diesel Fuel		A	C	B			A	A
Diethyl Ether		B	X	C		X	X	X
Diethyl Keytone		B	X	B	C	X	X	X
Diethyl Sebacate			X				X	X
Dimethylamine		C	C	C	C		X	X
Diocetyl Phthalate		A	X		B		X	C
Disodium Phosphate		A	T		A	T	T	T
Epichlorohydrin		A	X					
Ethyl Acetate		B	C	B	C			C
Ethyl Alcohol		A	A	A	B	T		A
Ethyl Bromide		A	X			X		X
Ethyl Chloride		C	X	C	C	X		X

Material	%	HDPE	PVC	LLDPE	RPE	PP	PU	EIA
Ethylene Dichloride		B	X	C	C	T	X	X
Ethylene Glycol		A	A	A	B	A	T	A
Ethylene Oxide		A	X	B		T	X	X
Ferric Chloride		A	T	A	A	T	T	T
Ferric Nitrate		A	T	A	A	T	T	T
Ferrous Chloride		A	T	A	A	T	T	T
Ferrous Sulfate		A	T	A	A	T	T	T
Fluosilicic Acid		A	A	A	32	T	X	T
Formaldehyde	40%	A	C	A	B	A	B	
Formic Acid		A	C	A	A	A	X	
Furfural		B	X	C	C	X	X	X
Gallic Acid		A	T	A	B	C	X	
Gasoline	<25 BTX	B	C	B- C	C	C	A	A
Gasoline	>25 BTX	B	C		C	C	A	
Glucose		A	T	A	A	T	T	T
Glycerine		A	X	A	B		T	A
Hexane		B	C	B			A	T
Hydraulic Fluid		A	C	B			X	A
Hydrazine		A	X	C			X	X
Hydrobromic Acid		A	T	A	50		X	T
Hydrochloric Acid	20%	A	A	A	A	A	X	A
Hydrochloric Acid	37%	A	A	A	A	T	X	A
Hydrocyanic Acid		A	T	A	A	T	T	T
Hydrofluoric Acid	20%	A	T	A	A		X	T
Hydrofluoric Acid	75%	A	T	A	A		X	T

Hydrofluosilicic Acid	30%	A	A					T
Hydrogen Peroxide	3%	A	A	A	A	X	A	A
Hydrogen Peroxide	10%	A	A	A	A	X	T	T
Hydrogen Sulfide		A	A	A	A	T	T	T
Hydroquinone		A	T	A	A	C		
Iso Octane		A	X			A	A	T
Isopropyl Alcohol	10%	A	T	A		T	A	A
JP-4 Jet Fuel		A	X			C	A	A
Jet A		A	X	B		X	T	T
Jet B		A	X			X	T	T
Kerosene		B	A	B		X	A	A
Lactic Acid		A	B	A	B	T	X	T
Lead Acetate		A	T	A	A	T	T	T
Linseed Oil		A	X	B	B		T	A
Lubricating Oil		A	C	B	X		T	T
Magnesium Carbonate		A	A	A	A	T	T	T
Magnesium Chloride		A	T	A	A	T	T	T
Magnesium Hydroxide		A	T	A	A	A	T	A
Magnesium Nitrate		A	T	A	A	T	T	T

Material	%	HDPE	PVC	LLDPE	RPE	PP	PU	EIA
Magnesium Sulphate		A	T	A	A	T	T	T
Malic Acid		A	T		A	T	T	T
Mercuric Chloride		A	T		A	T	T	T
Methyl Alcohol		A	T	A	B	T		A
Methyl Ethyl Keytone		C	C	C	C	X	C	C
Mineral Oil		A	B	B	B		A	T
Mineral Spirits		A	X	B		A	T	T
Naptha		B	B	B	C	C	X	T
Napthalene		A	C	C	C	X	X	X
Nitric Acid	10%	A	B	A	A	T	X	A
Nitric Acid	50%	A	B	A	A	A	X	C
Nitric Acid	70%	A	X	B	B	X	X	X
Nitro Benzene		C	C	C	C	X	X	X
Oleic Acid		B	T		C	T	T	T
Oleum	25%	C	X		C		X	
Oxalic Acid		A	A	A	A	T	T	
Palmatic Acid		A	T			T	T	T
Perchloroethylene	<1%	T	T	B		X	T	T
Perchloroethylene	100	C	X	C	C	X	C	C
Phenol		A	X	C	5%	T	C	B
Phenol Formaldahyde			C			T	X	T
Phosphoric Acid	50%	A	A	A	A	T	C	B
Phosphoric Acid	75%	A	A	A	A	T	X	X
Phosphorous Yellow			X			T	X	T
Phosphorous Pentoxide		A	T			T	X	X
Photographic Solutions		A		A	A		T	T

Phthalate Plasticizer		A	X				C	C
Pickling Solutions		A		A	B		X	X
Potassium Bicarbonate		A	A	A	A	T	T	T
Potassium Carbonate		A	A	A	A	T	T	T
Potassium Chromate	40%	A	T	A	A	T	T	T
Potassium Cyanide		A	T	A	A	T	T	T
Potassium Dichromate		40	T	A	40	T	T	T
Potassium Hydroxide		A	25	A	A	A	T	T
Potassium Nitrate		A	A	A	A	T	T	T
Potassium Perchlorate	10%	A	T	A	A	T	T	T
Potassium Permanganate		20	T	A	20	T	T	T
Potassium Sulfate		A	T	A	A	T	A	T
Pyradine		A	X	A	A		X	X
Salt Water		A	A	A	A	T	A	A
Silicone Grease		A	T	A		T		T
Silver Nitrate		A	X	A	A	T	T	T
Skydrol Hydraulic Fluid			X	C		A	C	C
Soap Solutions		B	A	A	A	T	A	A
Sodium Acetate		A	T	A	A	T	A	T
Sodium Bicarbonate		A	A	A	A	T	A	T

Material	%	HDPE	PVC	LLDPE	RPE	PP	PU	EIA
Sodium Bisulphite		A	T	A	A	T	T	T
Sodium Borate		A	T	A	A	T	T	T
Sodium Carbonate		A	A	A	A	T	T	T
Sodium Chlorate		A	T	A	A	T	T	T
Sodium Chloride		A	A	A	A	T	A	T
Sodium Dichromate	20%	100	T	A	A	T	T	T
Sodium Ferrocyanide		A	T	A	A	T	T	T
Sodium Fluoride		A	T	A	A	T	T	T
Sodium Hydroxide	25%	A	A	A	A	X	T	A
Sodium Hydroxide	60%	A	X	A	A	X		A
Sodium Hypochlorite		A	12	A	A	C	A	A
Sodium Nitrate		A	T	A	A	T	T	T
Sodium Sulphate		A	A	A	A	A	T	T
Soybean Oil		A	X				T	A
Stannous Chloride		A	T	A	A	T	T	X
Stearic Acid		A	T	A	B	T	A	A
Styrene		C	X		X	X	X	X
Sulphuric Acid	10%	A	A	A	A	T	X	A
Sulphuric Acid	40%	A	B	A	A	A	X	
Sulphuric Acid	98%	B	C	B	C	X	X	C
Tannic Acid		10	T	A	B	T	X	T
Tartaric Acid		A	T	A	10	T	T	T
Tetrahydrofuran		B	C	C	C	X	X	X
Toluene	<1%	T	T	B		C	T	T
Toluene	25%	T	X	C		X	T	T

Toluene	100	B	X	C	C	X	C	C
Transformer Oil		A	C	B	B		T	T
Triethanolamine		A	X		A		B	X
Trisodium Phosphate		A	T	A	A	T	T	T
Tung Oil			X			T		T
Turpentine		B	T	C	C		B	T
Urea		A	30	A	A	T	T	T
Vegetable Oil		A	C	B		A	A	A
Water		A	A	A	A	A	A	A
Xylene	<1%	T	T	B		X	T	T
Xylene	25%	T	X	C		X	T	T
Xylene	100	C	X	C	C	X	X	C
Zinc Chloride		A	A	A	A	T	T	T
Zinc Sulphate		A	T	A	A	T	T	T