Chemical Resistance
Guideline for Everguard TPO

Version 01 / 2018

Environment	Concentration %	Temperature °F (°C)	
		70 (21)	140 (60)
Acetic acid (glacial)	97	A	B
Acetic acid	50	A	A
Acetic acid	40	A	A
Acetic acid	10	A	A
Acetone		A	A
Acetophenone		B	B
Acriflavine (2% soln in H2O)	2	A	A
Acrylic emulsions		A	A
Aircraft exhaust		A	A
Airport environment		A	A
Aluminum chloride		A	A
Aluminum fluoride		A	A
Aluminum sulfate		A	A
Alums (all types)		A	A
Ammonia gas (dry)		A	A
Ammonia (aqueous)	30	A	--
Ammonium carbonate		A	A
Ammonium chloride		A	A
Ammonium fluoride	20	A	A
Ammonium hydroxide	10	A	A
Ammonium metaphosphate		A	A
Ammonium nitrate		A	A
Ammonium persulfate		A	A
Ammonium sulfate		A	A
Ammonium sulfide		A	A
Ammonium thiocyanate		A	A
Amyl acetate		B	C
Amyl alcohol		A	B
Amyl chloride		C	C
Aniline		A	A
Animal fat/grease		A	B
Anisole		B	B
Antimony chloride		A	A

Environment	Concentration %	Temperature °F (°C)	
		70 (21)	140 (60)
Aqua regia		**C	**C
Aviation gasoline (80 to 110 Octane)		C	D
Aviation turbine fuel		C	D
Barium carbonate		A	A
Barium chloride		A	A
Barium hydroxide		A	A
Barium sulfate		A	A
Barium sulfide		A	A
Beer		A	A
Benzene		C	D
Benzoic acid		A	A
Benzyl alcohol		A	A
Bismuth carbonate		A	A
Borax		A	A
Boric acid		A	A
Brine		A	A
Bromine liquid		D	--
Bromine water		**C	--
Butyl acetate		C	C
Butyl alcohol		A	--
Calcium carbonate		A	A
Calcium chlorate		A	A
Calcium chloride	50	A	A
Calcium hydroxide		A	A
Calcium hydrochlorite bleach	20	A	B
Calcium nitrate		A	A
Calcium phosphate	50	A	--
Calcium sulfate		A	A
Calcium sulfite		A	A
Carbon dioxide (dry)		A	A
Carbon dioxide (wet)		A	A
Carbon disulfide		B	C
Carbon monoxide		A	A

A = Negligible effect | B = Limited effect | C = Extensive Absorption | D = Extensive Attack

** May produce cracking in material under stress.
-- No data available

Note: When a concentration is not shown, the substance is pure or concentrated.

The data shown in this Guideline are the result of laboratory tests and are intended only as a guide. No performance warranty is intended or implied. Tests have been performed according to ISO 175: Exposure during 28 days at a temperature of 23 °C. Both mechanical properties and increase of weigth are measured during exposure.

When considering membranes supplied by BMI Group for a specific application, it is important to study other requirements such as permeability, service temperature, concentration, size to be contained etc. A sample of material should be tested in actual service before specification. When impractical, tests should be devised which simulate actual service as closely as possible. BMI Group Technical Department should be consulted for further recommandation. This table is presented and accepted at the users risk.

Environment	Concentration %	Temperature °F (°C)	
		70 (21)	140 (60)
Carbon tetrachloride		C	C
Carbonic acid		A	A
Caster oil		A	--
Cetyl alcohol		A	--
Chlorine (gas)		D	D
Chlorobenzene		C	C
Chloroform		C	D
Chlorosulfonic acid		D	D
Chrome alum		A	A
Chromic/sulfuric acid		D	D
Chromic acid	80	**B	--
Chromic acid	50	**B	**B
Chromic acid	10	**B	**B
Cider		A	A
Citric acid	10	A	A
Copper chloride		A	A
Copper cyanide		A	A
Copper nitrate		A	A
Copper fluoride		A	A
Copper sulfate		A	A
Cottonseed oil		A	B
Cuprous chloride		A	A
Cyclohexanol		A	B
Cyclohexanone		B	C
Decalin		C	C
Detergents	2	A	A
Developers (photographic)		A	A
Dibutyl phthalate		B	C
Dichloroethylene		C	--
Diethanolamine		A	A
Diisooctyl phthalate		B	C
Emulsifiers		A	A
Ethyl acetate		B	B
Ethyl alcohol	96	A	A
Ethylene glycol		A	A
Ethanolamine		A	A
Ethyl ether		C	--
Ethyl chloride		C	C
Ethylene dichloride		B	--
Ethylene oxide		B	--
Fatty acids (C6)		A	A
Ferric chloride		A	A
Ferric nitrate		A	A

Environment	Concentration %	Temperature °F (°C)	
		70 (21)	140 (60)
Ferric sulfate		A	A
Ferrous chloride		A	A
Ferrous sulfate		A	A
Fluorosilicic acid		A	A
Formaldehyde	40	A	A
Formic acid		A	--
Formic acid	10	A	A
Fructose		A	A
Fruit juices		A	A
Furfural		C	C
"Gasoline (the higher the octane		C	D
Gas liquor		C	--
Gear box oil		B	C
Gelatin		A	A
Glucose	20	A	A
Glycerin -lubricating (petroleum based)		A	A
Glycol		A	A
Grease		B	C
Hexane	100	C	D
Hydrobromic acid	50	**B	C
Hydrochloric acid	30	A	A
Hydrochloric acid	20	A	A
Hydrochloric acid	10	A	A
Hydrochloric acid	2	A	A
50-50 Hydrochloric-Nitric Acid		**B	**D
Hydrofluoric acid	40	A	--
Hydrofluoric acid	60	**B	**C
Hydrogen peroxide	30	A	B
Hydrogen peroxide	10	A	B
Hydrogen peroxide	3	A	A
Hydrogen chloride gas (dry)		A	A
Hydrogen sulfide		A	A
Hydroquinone		A	A
Inks		A	A
Iodine tincture		A	--
Isopropyl alcohol		A	A
Iso-octane		C	D
Jet Fuel (kerosene based)		C	D
Kerosene		C	D
Ketones		A	--
Lactic acid	20	A	A
Lanolin		A	A
Lead acetate		A	A

Environment	Concentration %	Temperature °F (°C)	
		70 (21)	140 (60)
Linseed oil		A	A
Lubricating oil (petroleum based)		B	C
Magenta dye (aqu. solutin)	2	A	A
Magnesium carbonate		A	A
Magnesium chloride		A	A
Magnesium hydroxide		A	A
Magnesium nitrate		A	A
Magnesium sulfate		A	A
Magnesium sulfite		A	A
Meat juices		A	A
Mercuric chloride	40	A	A
Mercuric cyanide		A	A
Mercury		A	A
Mercurous nitrate		A	A
Methyl ethyl ketone		A	B
Methyl alcohol		A	A
Methylene chloride		A	--
Milk and its products		A	A
Mineral oil		B	C
Molasses		A	A
Motor oil (conventional)		B	C
Motor oil (synthetic)		B	C
Naphthalene		A	A
Nickel chloride		A	A
Nickel nitrate		A	A
Nickel sulfate		A	A
Nitric acid		D	D
Nitric acid	70	**C	D
Nitric acid	60	**C	D
Nitric acid	10	A	D
50-50 Nitric-Hydrochloric acid		**C	D
50-50 Nitric-Sulfuric Acid		**C	D
Nitrobenzene		A	A
Oleic acid		A	B
Olive oil		A	A
Oxalic acid (aqueous)	50	A	B
Paraffin		A	B
Paraffin wax		A	A
Petrol (gasoline)		C	D
Phenol		A	A
Phosphoric acid	95	A	B
Plating solutions, brass		A	A
Plating solutions, cadmium		A	A

Environment	Concentration %	Temperature °F (°C)	
		70 (21)	140 (60)
Plating solutions, chromium		A	A
Plating solutions, copper		A	A
Plating solutions, gold		A	A
Plating solutions, indium		A	A
Plating solutions, lead		A	A
Plating solutions, nickel		A	A
Plating solutions, rhodium		A	A
Plating solutions, silver		A	A
Plating solutions, tin		A	A
Plating solutions, zinc		A	A
Petroleum ether (B.P. 100-140ºC)		C	D
Potassium bicarbonate		A	A
Potassium borate	1	A	A
Potassium bromate	10	A	A
Potassium bromide		A	A
Potassium carbonate		A	A
Potassium chlorate		A	A
Potassium chloride		A	A
Potassium chromate	40	A	A
Potassium cyanide		A	A
Potassium dichromate	40	A	A
Potassium ferri/ferrocyanide		A	A
Potassium fluoride		A	A
Potassium hydroxide	50	A	A
Potassium hydroxide	10	A	A
Potassium nitrate		A	A
Potassium perborate		A	A
Potassium perchlorate	10	A	A
Potassium permanganate	20	A	A
Potassium sulfate		A	A
Potassium sulfide		A	A
Potassium sulfite		A	A
Propyl alcohol		A	A
Pyridine		A	--
Silicone oil		A	A
Soap solution (concentrated)		A	A
Sodium acetate		A	A
Sodium bicarbonate		A	A
Sodium bisulfate		A	A
Sodium bisulfite		A	A
Sodium borate		A	A
Sodium bromide oil solution		A	A
Sodium carbonate		A	A

Environment	Concentration %	Temperature °F (°C)	
		70 (21)	140 (60)
Sodium chlorate		A	A
Sodium chloride		A	A
Sodium chlorite	2	A	A
Sodium chlorite	5	A	A
Sodium chlorite	10	A	A
Sodium chlorite	20	A	A
Sodium cyanide		A	A
Sodium dichromate		A	A
Sodium ferricyanide		A	A
Sodium ferricyanide		A	A
Sodium fluoride		A	A
Sodium hydroxide	50	A	A
Sodium hydroxide	10	A	A
Sodium hypochlorite	20	A	B
Sodium nitrate		A	A
Sodium nitrate		A	A
Sodium silicate		A	A
Sodium sulfate		A	A
Sodium sulfide	25	A	A
Sodium sulfite		A	A
Stannous chloride		A	A
Stannic chloride		A	A
Starch		A	A
Sulfates of calcium & magnesium		A	A
Sulfates of potassium & sodium		A	A
Sulfur		A	A
Sulfuric acid	98	**C	D
Sulfuric acid	60	B	C
Sulfuric acid	50	B	C
Sulfuric acid	10	A	A
50-50 Sulfuric-Nitric Acid		**C	D
Sugars and syrups		A	A
Sulfamic acid		A	A
Tallow		A	B
Tannic acid	10	A	A
Tartaric acid		A	A
Tetrahydrofuran		C	D
Tetralin		C	C
Toluene		C	D
Transformer oil		B	C
Trichloroacetic acid	10	A	A
Trichloroethylene		C	C
Triethanolamine		A	A

Environment	Concentration %	Temperature °F (°C)	
		70 (21)	140 (60)
Turpentine		C	C
Urea		A	A
Urine		A	A
Vaseline		A	A
Vegetable oils (general)		A	B
Vinegar		A	A
Water (distilled, soft, hard & vapor)		A	A
Wet chlorine gas		--	D
Whisky		A	A
White paraffin		A	B
White spirit		B	C
Wines		A	A
Xylene		C	D
Yeast		A	A
Zinc chloride		A	A
Zinc oxide		A	A
Zinc sulfate		A	A