



This information is based on our experience, research and support from other published chemical resistance charts. It is believed to be reliable; it is however, intended to be used only as a guide. Assmann Corporation of America assumes no responsibility in connection with it's use.

Additional assistance should be requested if there is a doubt about compatibility, suitability, warranty, allowable transportability, or storage in Assmann products.

**RATINGS**

- A** —No Effect—Excellent—at ambient temperature  
**B** —Minor Effect—Good—at ambient temperature  
**C** —Moderate Effect—Fair—additional research required  
**D** —Severe Effect—NOT RECOMMENDED  
 — —No Data

**CHEMICAL ATTACK**

**SERVICE TEMPERATURE LIMITATIONS**

Crosslink polyethylene: -40 degree F to + 150 degree F  
 Linear polyethylene: -20 degree F to + 120 degree F

*Note: Constant service temperatures above 100 degree F greatly reduce useful tank life, please consult factory.*

Chemical Name	Polyethylene	Polypropylene	P.V.C.	316 Stainless Steel	Titanium	Hastelloy C-276	Viton	E.P.D.M.
Acetic Acid* 1-10%	A	A	B	A	B	A	C	A
Acetic Acid* 10-60%	A	A	C	A	B	A	C	A
Acetic Acid* 80-100%	A	A	C	A	B	A	C	B
Aluminum Chloride-dilute	A	A	A	C	A	A	A	A
Aluminum Chloride-conc.	A	-	A	C	A	A	A	A
Aluminum Flouride-conc.	A	A	A	C	A	B	-	A
Aluminum Sulfate-conc	A	A	A	A*	A	A	A	A
Alums (all types) conc***	A	A	A	A	A	A	A	A
Ammonia 100% Dry Gas	A	A	A	A	A	-	-	B
Ammonium Carbonate	A	A	A	A	A	B	B	C
Ammonium Chloride-sat'd	A	A	A	A	-	A	B	A
Ammonium Flouride 20%	A	-	A	-	-	-	-	-
Ammonium Hydroxide 0,888 sq	A	A	A	A	A	A	B	A
Ammonium Metaphosphate sat'd	A	A	A	-	-	-	-	-
Ammonium Nitrate sat'd	A	A	A	A	A	A	B	A
Ammonium Persulfate sat'd	A	A	A	A	-	A	A	B
Ammonium Sulfate sat'd	A	A	A	A	A	B	-	A
Ammonium Sulfide sat'd	A	-	-	A	A	B	D	A
Ammonium Thiocyanate sat'd	A	-	-	-	-	-	-	-
Amyl Alcohol* 100%	A	A	A	A	-	A	B	A
Aniline 100%	A	B	A	A	C	B	D	A
Antimony Chloride	A	-	-	-	-	-	-	A
Barium Carbonate sat'd	A	A	A	A	A	-	-	A
Barium Chloride	A	A	A	A	A	A	B	-
Barium Hydroxide	A	A	A	A	B	B	A	A
Barium Sulfate sat'd	A	A	A	A	-	-	A	A
Barium Sulfide sat'd	A	A	A	A	-	-	A	A
Benzene Sulfonic Acid*	A	D	-	-	-	-	-	A
Borax Cold sat'd	A	A	A	A	A	A	A	A
Boric Acid Dilute	A	A	A	A	A	A	A	A
Boric Acid Conc	A	A	A	A	-	A	A	A
Bromic Acid 10%	A	D	-	-	-	-	-	-
Calcium Bisulfide	A	A	A	B	A	A	A	-
Calcium Carbonate sat'd	A	A	A	A	A	A	A	A
Calcium Chlorate sat'd	A	A	A	-	A	-	-	A
Calcium Chloride sat'd	A	A	A	A	A	A	A	A
Calcium Hydroxide	A	A	A	A	A	A	A	A
Calcium Hypochlorite Bleach	A	A	A	B	A	A	A	A
Calcium Nitrate 50%	A	-	A	-	-	-	-	A
Calcium Sulfate	A	A	A	A	-	B	A	A
Carbon Dioxide 100% Dry	A	A	A	A	A	-	B	A
Carbon Dioxide 100% Wet	A	A	A	A	A	-	B	A
Carbon Dioxide Cold sat'd	A	-	A	A	A	-	B	A
Carbonic Acid	A	-	A	B	-	A	A	A
Castor Oil* Conc	A	-	A	-	-	A	A	A
Chrome Alum sat'd	A	-	B	-	-	-	A	B
Chromic Acid 20%	A	A	B	A	A	A	A	D
Cider*	A	-	A	A	-	-	A	-
Citric Acid* sat'd	A	B	A	A	A	A	A	A
Coconut Oil Alcohols*	A	-	-	A	-	-	A	D

Chemical Name	Polyethylene	Polypropylene	P.V.C.	316 Stainless Steel	Titanium	Hastelloy C-276	Viton	E.P.D.M.
Cola Concentrates*	A	-	-	A	-	-	-	-
Copper Chloride sat'd	A	A	A	D	A	-	A	A
Copper Cyanide sat'd	A	A	A	A	-	A	A	A
Copper Fluoride 2%	A	-	A	D	-	-	-	-
Copper Nitrate sat'd	A	A	A	A	A	A	A	-
Copper Sulfate Dilute 5%	A	A	A	A	A	-	A	A
Copper Sulfate sat'd	A	-	-	A	A	-	-	A
Cottonseed Oil*	A	-	A	A	-	-	A	B
Cuprous Chloride sat'd	A	-	-	-	-	-	A	A
Cychohexanol*	A	-	-	A	-	-	A	D
Detergents Synthetic*	A	A	A	A	-	-	A	A
Developers, Photographic	A	-	A	A	A	-	A	-
Dextrin sat'd	A	-	-	-	-	-	-	-
Dextros sat'd	A	A	A	-	-	-	-	-
Dibutylphthalate	A	-	-	-	-	-	B	C
Disodium Phosphate	A	A	D	D	D	A	A	-
Ethylene Glycol*	A	D	A	A	-	-	A	A
Ferric Chloride sat'd	A	A	A	D	D	-	A	A
Ferric Nitrate sat'd	A	A	A	A	-	-	A	A
Ferric Sulfate	A	A	A	A	A	A	A	A
Ferrous Chloride sat'd	A	A	A	D	A	-	A	A
Ferrous Sulphate	A	A	A	A	A	B	A	A
Flouboric Acid	A	-	A	B	D	A	A	D
Flosilicic Acid 32%	A	-	A	C	-	B	A	A
Flosilicic Acid conc.	A	-	A	D	-	B	A	A
Formaldehyde* 40%	A	A	A	A	A	A	A	A
Formic Acid* 0-20%	A	A	D	A	-	A	B	A
Formic Acid* 20-50%	A	A	D	A	C	A	B	A
Formic Acid* 100%	A	A	D	A	-	A	B	A
Fructose sat'd	A	A	A	A	-	-	-	-
Fruit pulp	A	A	A	A	-	-	A	-
Gallic Acid sat'd	A	-	-	-	-	-	-	A
Glucose	A	A	A	A	-	-	A	A
Glycerine*	A	A	A	A	A	A	A	A
Glycol*	A	-	A	-	-	-	-	A
Glycolic Acid* 30%	A	A	A	-	-	A	A	-
Grape Sugar sat'd ag	A	A	A	A	-	-	-	-
Hydrobromic Acid 50%	A	B	A	D	A	A	A	-
Hydrocyanic Acid sat'd	A	A	A	-	C	A	A	-
Hydrochloric Acid 10%	A	A	A	D	C	A	A	A
Hydrochloric Acid 30%	A	A	A	D	C	A	A	A
Hydrochloric Acid 35%	A	A	A	D	C	A	A	D
Hydrochloric Acid conc.	A	A	A	D	C	A	A	D
Hydroflouric Acid 40%	A	A	D	D	D	B	A	D
Hydroflouric Acid 60%	A	D	D	D	D	B	A	D
Hydroflouric Acid 75%	A	D	D	D	D	B	A	D
Hydroflosilicic Acid	A	B	B	-	A	-	-	A
Hydrogen Bromide 10%	A	-	D	-	-	-	-	-
Hydrogen Peroxide 30%	A	A	A	A	B	A	A	D
Hydrogen Peroxide 90%	A	A	A	D	B	A	A	D

Chemical Name	Polyethylene	Polypropylene	P.V.C.	316 Stainless Steel	Titanium	Hastelloy C-276	Viton	E.P.D.M.
Hydrogen Phosphide 100%	A	-	-	-	-	A	-	-
Hydroquinone	A	-	-	-	-	-	-	C
Hydrogen Sulfide	A	A	A	A	A	-	D	B
Inks*	A	-	-	A	-	-	A	-
Iodine (alc. Sol) conc.	A	D	D	D	A	B	A	B
Lactic Acid* 10%	A	A	A	-	A	-	-	A
Lactic Acid* 90%	A	A	A	A	A	-	A	B
Latex*	A	A	A	A	-	-	A	A
Lead Acetate sat'd	A	A	A	B	A	-	D	A
Lube Oil	A	A	A	A	-	-	A	C
Magnesium Carbonate sat'd	A	A	A	A	-	B	-	-
Magnesium Chloride sat'd	A	A	A	A	A	A	A	A
Magnesium Hydroxide sat'd	A	A	A	A	A	-	A	A
Magnesium Nitrate sat'd	A	A	A	A	-	-	-	A
Magnesium Sulphate sat'd	A	A	A	A	A	B	A	A
Mercuric Chloride sat'd	A	-	A	D	A	B	A	A
Mercurous Nitrate sat'd	A	-	A	-	-	-	-	A
Milk	A	A	A	A	A	-	A	A
Mineral Oils	A	-	A	A	-	-	-	D
Molasses	A	A	A	A	-	-	A	A
Nickel Chloride sat'd	A	A	A	A	A	-	A	A
Nickel Nitrate conc.	A	A	A	A	-	-	-	-
Nickel Sulfate sat'd	A	A	A	A	-	-	A	A
Nitric Acid* 0-30%	A	A	A	A	A	A	A	A
Oils & Fats	A	A	-	A	-	-	A	B
Oleic Acid conc.	A	A	A	A	-	-	B	D
Orange Extract*	A	-	-	A	-	-	-	-
Oxalic Acid* dilute	A	A	A	-	C	B	A	-
Oxalic Acid* sat'd	A	A	A	A	C	-	A	A
Perchloric Acid 10%	A	-	-	-	-	-	-	A
Phosphoric Acid up to 30%	A	A	A	A	A	A	A	A
Phosphoric Acid over 30%	A	A	A	B	B	A	A	A
Phosphoric Acid over 90%	A	A	A	B	B	A	A	A
Phosphoric (Yellow) 100%	A	-	-	-	-	-	-	-
Phosphorus Pentoxide 100%	A	-	-	-	-	-	-	-
Photographic Solutions	A	A	A	A	A	A	-	-
Pickling Baths								
Sulfuric Acid*	A	-	-	B	-	-	A	D
Hydrochloric Acid*	A	-	A	D	A	-	A	D
Sulfuric-Nitric*	A	-	-	B	-	-	A	D
Plating Solutions								
Brass*	A	A	A	A	-	A	-	B
Cadmium*	A	A	A	-	-	A	-	B
Copper*	A	A	A	-	-	-	A	B
Gold*	A	A	A	A	-	-	A	B
Indium*	A	A	A	A	-	-	A	B
Lead*	A	A	A	-	-	-	A	B
Nickel*	A	A	A	-	-	-	A	B
Rhodium*	A	-	-	-	-	-	-	B
Silver*	A	A	A	A	-	-	A	B
Tin*	A	A	A	A	-	-	A	B
Zinc*	A	A	A	A	A	-	A	B
Potassium Bicarbonate sat'd	A	-	A	B	-	-	A	A
Potassium Borate 1%	A	-	-	-	-	-	-	-
Potassium Bromate 10%	A	-	A	A	-	-	-	-
Potassium Bromide sat'd	A	A	A	A	A	A	-	A
Potassium Carbonate	A	A	A	A	-	B	A	A
Potassium Chlorate sat'd	A	A	A	A	-	B	A	A
Potassium Chloride sat'd	A	A	A	A	A	B	A	A
Potassium Chromate 40%	A	A	A	B	A	A	A	-
Potassium Dichromate 40%	A	A	A	A	A	B	A	A
Potassium Hydroxide 20%	A	A	A	A	C	B	D	A

Chemical Name	Polyethylene	Polypropylene	P.V.C.	316 Stainless Steel	Titanium	Hastelloy C-276	Viton	E.P.D.M.
Potassium Hydroxide conc.	A	A	A	A	C	B	D	A
Potassium Nitrate sat'd	A	-	A	A	-	B	-	A
Potassium Perborate sat'd	A	-	-	-	-	-	A	-
Potassium Perchlorate 10%	A	-	-	-	-	-	-	-
Potassium Permanganate	A	A	D	A	A	A	A	A
Potassium Sulfate conc.	A	A	A	B	A	B	A	A
Potassium Sulfide conc.	A	A	-	-	A	-	A	B
Potassium Sulfite conc.	A	A	A	-	A	-	A	D
Potassium Persulfate sat'd	A	-	A	-	-	-	-	-
Propylene Glycol*	A	-	-	A	-	-	A	A
Rayon Coagulations Bath*	A	-	-	-	-	-	-	-
Sea Water	A	A	A	A	A	-	A	A
Selenic Acid	A	-	-	-	-	-	-	-
Shortening*	A	A	-	A	-	-	-	-
Silicic Acid	A	-	-	-	-	-	-	-
Silver Nitrate Sol.	A	A	A	A	-	-	A	A
Soap Solution* any conc	A	A	D	A	-	-	A	A
Sodium Acetate sat'd	A	A	A	A	A	-	A	A
Sodium Benzoate 35%	A	-	-	-	-	-	-	-
Sodium Bicarbonate sat'd	A	A	A	A	-	B	A	A
Sodium Bisulfate sat'd	A	A	A	A	A	A	A	A
Sodium Bisulfite sat'd	A	A	A	A	A	B	A	A
Sodium Borate	A	-	-	-	-	-	A	A
Sodium Bromide Dilute Sol.	A	-	-	-	-	-	A	-
Sodium Carbonate conc.	A	A	A	A	A	-	A	-
Sodium Carbonate	A	A	A	A	A	-	A	A
Sodium Chlorate sat'd	A	A	A	A	A	A	A	-
Sodium Chloride sat'd	A	A	A	A	A	A	A	-
Sodium Dichromate sat'd	A	-	-	-	-	-	A	-
Sodium Hydroxide conc.	A	A	A	A	A	B	B	A
Sodium Hypochlorite to 17%*	A	A	A	D	A	B	A	B
Sodium Nitrate	A	A	A	A	A	-	A	A
Sodium Sulfate	A	A	A	A	A	B	A	A
Sodium Sulfide 25%	A	A	A	A	A	-	A	A
Sodium Sulfide sat's sol	A	A	A	A	A	-	A	A
Sodium Sulfite sat'd	A	A	A	A	A	-	A	A
Stannic Chloride sat'd	A	-	A	A	A	-	A	A
Stannous Chloride sat'd sol	A	-	A	A	A	-	A	A
Starch Solution* sat'd	A	-	A	-	-	-	A	A
Stearic Acid* 100%	A	D	-	-	A	-	A	C
Sulfuric Acid 0-50%	A	A	A	B	A	A	A	C
Sulfuric Acid 70%	A	A	A	B	D	B	A	D
Sulfuric Acid 80%	A	D	D	-	-	A	A	D
Sulfurous Acid	A	A	A	B	A	B	A	C
Tallow	A	-	-	A	-	-	A	A
Tannic Acid* 10%	A	A	A	A	A	-	A	A
Tanning Extracts* Comm	A	-	A	A	-	A	-	-
Tartaric Acid sat'd	A	A	A	A	A	B	A	A
Transformer Oil	A	A	A	A	-	-	A	D
Trisodium Phosphate sat'd	A	-	-	-	-	-	-	-
Urea* Up to 30%	A	-	A	A	-	-	A	-
Urine	A	A	A	A	-	-	A	-
Vinegar Comm.	A	A	A	A	-	-	A	A
Vanilla Extract*	A	-	-	A	-	-	-	-
Water-All Types	A	A	A	A	A	A	A	A
Wetting Agents*	A	-	-	A	-	-	-	-
Whiskey*	A	A	A	A	-	-	A	A
Wines	A	A	A	A	-	-	A	A
Yeast	A	A	-	A	-	-	-	-
Zinc Chloride sat'd	A	A	-	A	-	-	-	-
Zinc Sulfate sat'd	A	A	A	A	A	-	A	A

\* Stress Cracking Agent

\*\* No Free Sulfuric Acid