General Chemical Resistance Chart

The following chart lists the most common chemicals safely stored in high density linear polyethylene (HDLPE) tanks from Peabody Engineering & Supply, Inc. Please review the list to determine general chemical compatibility of HDLPE. If you don't find your chemical on this list, please contact your sales representative for further assistance. We have an exhaustive list of reference material available to assist you in making your decision. All of the chemicals listed below show compatibility of HDLPE at ambient temperature (70 degrees F). Some chemicals react differently at different temperatures. Use caution in making your decision. Mixed chemicals also react differently than individual, unmixed chemicals. This chemical resistance chart does not address mixed chemical compatibility and use of Peabody HDLPE tanks for mixed chemicals is not recommended without specific testing and determination of suitibility. The general temperature range for an unreinforced HDLPE tank is from 32 to 140 degrees Fahrenheit. This range may be limited with specific chemicals and concentrations. Use caution when storing chemicals at extreme temeratures (high or low).

Key - S = Satisfactory, U = Unsatisfactory, NA = No data available; Testing recommended, A= Known stress crack agent, O= Oxidizer

Chemical Name	% Concentration	Rating	Chemical Name	% Concentration	Rating
Acetic Acid	60	S	Isopropyl Alcohol	100	S
Acetic Acid	80	S	Lime		S
Aluminum Chloride	All Concentrations	S	Magnesium Chloride	0-30	S
Aluminum Sulfate	0-26	S	Magnesium Hydroxide	Sat d	S
Alums	All Types	S	Methyl Alcohol	100	S
Ammonium Fluoride	Sat d	S	Molasses		S
Ammonium Hydroxide	10	S	Motor Oil	100	S
Ammonium Sulfate	0-40	S	Nickel Chloride	Concentrate	S
Barium Salts		S	Nitric Acid	0-30	S
Beer		S	Nitric Acid	30-50 (O)	S
Bleach Lye	10	S	Nitric Acid	70 (O)	U
Borax	Sat d	S	Phosphoric Acid	85	S
Boric Acid	All Concentrations	S	Phosphoric Acid	0-50	S
Brine		S	Photographic Solutions		S
Calcium Carbonate	Sat d	S	Plating Solutions		S
Calcium Chloride	0-40	S	Potassium Bromide	Sat d	S
Calcium Nitrate	0-50	S	Potassium Carbonate	50	S
Castor Oil	All Concentrations (A)	S	Potassium Chlorate	Sat d	S
Chromic Acid	10	S	Potassium Chloride	Sat d	S
Chromic Acid	50	S	Potassium Cyanide	Sat d	S
Citric Acid	Sat d (A)	S	Potassium Hydroxide	Sat d	S
Cola Concentrates	A	S	Potassium Sulfate	Concentrate	S
Copper Chloride	Sat d	S	Sea Water		S
Copper Cyanide	Sat d	S	Silver Nitrate Solution		S
Copper Nitrate	Sat d	S	Soap Solution	Any Concentration (A)	S
Copper Sulfate	Sat d	S	Sodium Bromide	Dilute	S
Deionized Water	5 Megohm	S	Sodium Carbonate	30	S
Detergents - Synthetic	A	S	Sodium Carbonate	Sat d	S
Developers - Potographic		S	Sodium Cyanide		S
Emulsions	Photographic (A)	S	Sodium Hydroxide	0-50	S
Ethyl Alcohol	100 (A)	S	Sodium Hypochlorite	<16.5	S*
Ethyl Alcohol	35 (A)	S	Sodium Nitrate		S
Ethylene Glycol	100 (A)	S	Sodium Sulfate		S
Ferric Chloride	60	S	Sodium Thiosulfate	40	S
Ferrous Chloride	Sat d	S	Starch Solution	Sat d (A)	S
Ferrous Sulfate	20	S	Sulfuric Acid	0-98	S
Fluosilicic Acid	All Concentrations	S	Sulfurous Acid		S
Formic Acid	All Concentrations	S	Urea	0-30	S
Glycerine	A	S	Vinegar		S
Glycol	A	S	Water w/Ozone up to 10 PPM		S
Hydrochloric Acid	0-48	S	Zinc Salts		S
Hydrofluosilicic Acid	0-26	S			
Hydrogen Peroxide	0-50	S			
Hydrogen Sulfide		S			
Hypochlorous Acid	Concentrate	S			

*Sodium Hypochlorite is recommended in special tanks only-consult your salesperson.

Peabody Engineering & Supply, Inc. has compiled this list from the various resin manufacturers and suppliers as a guide for users of high density linear polyethylene tanks in chemical service. It may be considered as a basis for recommendation, but PEABODY ENGINEERING& SUPPLY INC. MAKES NO WARRANTY AS TO FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ANY MATERIALS PURCHASED. Materials should be tested under actual service conditions to determine their suitability for a particular purpose.

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