TECHNICAL GUIDE FAQs

WATER and LIQUID TANKS

June 1, 2025

FREQUENTLY ASKED QUESTIONS

What materials are used to manufacture your poly tanks?
Elkhart Plastics manufactures tanks using high-density polyethylene (HDPE). The specific type of HDPE used depends on the tank size, as HDPE offers greater density, chemical resistance, and impact resistance compared to medium-density polyethylene.

What chemicals can I store in your tanks?
User is responsible for determining compatibility of chemicals with tank and fitting materials. Identify the chemical(s) to be stored in the tanks. Be sure to obtain a Certificate of Composition, Material Safety Data Sheet (MSDS), or other relevant documentation from the chemical supplier to accurately identify the chemical compounds. This information is essential for evaluating the effects of the chemical on polyethylene storage containers. Ensure that the tank, fittings, and gasket materials are compatible with both the chemical and the anticipated storage temperatures. Refer to the Chemical Resistance Data Chart on page 15 to determine whether the chemical is compatible with polyethylene. If the resistance data does not list the chemical you intend to store, contact the chemical manufacturer for recommendations on storage in polyethylene tanks

How heavy a material can polyethylene tanks hold?
Elkhart Plastics' standard tanks are designed with a specific gravity rating listed on the tank. Our tanks, ranging in size from 50 to 3000 gallons have specific gravity design ratings listed on the tank. Specific gravity is defined as the ratio of a chemical's weight per gallon to the weight of liquid per gallon (8.33 lb/gallon). For example, if a chemical weighs 10 lb per gallon, its specific gravity is calculated as 10.0 ÷ 8.33 = 1.2. (In metric units: kilograms per cubic meter or grams per liter.) Substances with a specific gravity greater than 1.0 are heavier than water, while those with a specific gravity less than 1.0 are lighter than water.

What is the wall thickness of your liquid tanks?
The tank's wall thickness tapers from top to bottom. We carefully select the appropriate materials and resin grades to achieve the desired specific gravity.

What are witness lines in liquid tanks?
Witness lines are visible imperfections in the finished product, caused by cracks that develop in the mold. These cracks typically occur in areas of the mold that experience the greatest stress, such as radiuses. When a crack goes undetected, the heat of the molding process allows molten plastic to seep into the crack, creating a witness line that mirrors the original mold defect. Running a fingernail across the witness line reveals that the plastic is protruding, rather than indented. In fact, the witness line can be scraped away, leaving a solid plastic surface. While unsightly, this cosmetic defect does not affect the structural integrity of the product.

What is the warranty on your liquid tanks?
Elkhart Plastics warrants that the products sold to the purchaser meet the seller's specifications and are free from defects in materials and workmanship. This warranty lasts for five years from the original purchase date, unless the seller specifies otherwise in writing. However, the warranty can be extended to ten years if the original purchaser or end user registers the products with the seller within 30 days of the original purchase date. For full details, please refer to the complete warranty statement.

Are your liquid tanks FDA compliant?
Elkhart Plastics manufactures liquid tanks using FDA-compliant resins. Our natural, black, blue, tan, and green colored tanks fully comply with current FDA standards for polyethylene tanks. However, certain colors, such as yellow, may affect compliance when blended into the resin. If FDA compliance is required, please specify this when placing your tank order, and we will assist you in selecting the appropriate color.

Are your tanks FDA approved and are they safe for water storage?
Elkhart Plastics' above-ground tanks provide a safe solution for water storage. Our polyethylene tanks and polypropylene lids and fittings are manufactured using FDA-compliant materials. For information on additional FDA-approved color options, please contact our factory.

Do your water tanks contain any BPA's?
Elkhart Plastics' water tanks are manufactured using polyethylene, a plastic that does not contain bisphenol A (BPA). BPA is typically found in polycarbonate plastics and the epoxy linings of cans, but it is not used in the production of polyethylene. Polyethylene is a safe, non-leaching material that has been approved for direct food contact applications for decades.

Are your above ground liquid tanks NSF approved?
The National Sanitary Foundation (NSF) evaluates multiple factors when granting approval, including the materials used and the final product configuration, such as any fittings and accessories that will be exposed to chemicals. Therefore, it is recommended to consult the manufacturer regarding the NSF approval status.

Is there UV protection in the resin you use?
Elkhart Plastics' liquid tanks are molded from polyethylene compounded with the latest UV light stabilizer technology. These UV stabilizers are designed to mitigate the harmful effects of ultraviolet light exposure, extending the lifespan of the tanks compared to similar materials without stabilizers. Our standard UV rating is "15," meaning the tanks will retain 50% of their UV protection after 15,000 hours of sun exposure. However, this rating can vary based on location and duration of sun exposure, so we recommend consulting the factory for the specific UV rating of the product you intend to use.

Do your tanks have a UL rating?
The UL 94 standard categorizes materials based on their flammability. Our polyethylene has a UL94HB rating, meaning it must not burn faster than 1.5 inches per minute for thicknesses between 0.120 and 0.500 inches, or 3 inches per minute for thicknesses less than 0.120 inches. Additionally, the specimens must extinguish themselves before the flame reaches 4 inches.

Does the color of a water tank give any indication as to the quality of the tank?
Elkhart Plastics water tanks are made from polyethylene blended with ultraviolet (UV) stabilizers, which are designed to extend the tanks' lifespan by mitigating the harmful effects of UV light exposure. The standard tank color is black, but customers can opt for non-standard colors like green or tan. However, the tank color does not impact its UV resistance or longevity. It's important to note that the color may affect FDA compliance.

Does the color of a water tank have an impact on Algae growth?
Black tanks are the most effective at preventing light transmission. While other highly concentrated colors can also eliminate translucence, the pigments act as contaminants when mixed with polyethylene, potentially weakening the tank. Green or tan tinted tanks (excluding black) typically allow enough light to sustain photosynthesis and promote algae growth. Therefore, one cannot definitively state that colored tanks do not promote algae without evaluating the specific level of light energy transmission. Any amount of light energy can enable algae formation.

Can I store chemicals or fertilizers in Elkhart Plastics Water Only storage tanks?
No, Elkhart Plastics Water Only storage tanks with a specific gravity design rating of 1.0 are specifically designed for potable water storage and are not rated to hold chemicals, fertilizers, or any other substances besides clean water.

Can I store Deionized water in your tanks?
Elkhart Plastics' polyethylene tanks can store deionized water at temperatures up to 100°F (38°C).

Does the presence of ozone affect a polyethylene liquid tank?
Ozone is sometimes used for water purification. According to Ozone Solutions (http://www.ozoneapplications.com/), High Density Polyethylene (HDPE) has excellent compatibility with ozone, while polypropylene fittings are only rated as "fair" for ozone compatibility. As a result, polypropylene fittings are not recommended for continuous ozone exposure, as softening, loss of strength, and/or swelling may occur. However, the specific ozone concentrations used in the compatibility testing are not specified. Additionally, 100% ozone is not recommended for use in our tanks. To ensure safe operation, tanks should be inspected on a semi-annual basis.

Can your Liquid Tanks be pressurized?
Our water tanks cannot be pressurized or exposed to vacuum.

Can your Liquid Tanks be buried?
Our liquid tanks are not suitable for burial, as they are not engineered to withstand the pressure exerted by the surrounding soil.

What is the maximum temperature that your liquid tanks can withstand?
Elkhart Plastics tanks can withstand sustained temperatures up to 120°F (49°C) and intermittent temperatures up to 140°F (60°C). However, exposure to higher service temperatures will lower the tank's specific gravity rating.

How many years will my liquid tank last?
The life expectancy of a polyethylene tank is influenced by numerous factors, such as the stored material, indoor/outdoor placement, stationary or mobile use, and UV exposure, among other variables.

Will freezing temperatures hurt my poly tank?
Polyethylene tanks are not affected by freezing temperatures. However, if you plan to store a liquid in the tank that may freeze, be sure to leave enough room for expansion. Keep in mind that polyethylene tanks have a greater risk of cracking during transport in cold weather.

Is there some way to tell when my liquid tank was made?
All Elkhart Plastics water tanks are embossed with a date stamp in the month/year format.

Are these tanks repairable through plastic welding?
Polyethylene tanks can be repaired by qualified personnel through welding.

How tight can I tighten a bulkhead fitting?
To avoid damaging and leaking poly fittings, tighten the nut only to hand-tight plus a half-turn. Over-tightening can crack the fittings. If using thread sealant, ensure it is compatible with both the fittings and the chemicals they will contain.

What type of surface is required for placement of a vertical liquid tank?
When selecting the tank site, ensure the area is level and has adequate drainage for liquid runoff. The tank bottom must be fully supported. For tanks over 1,000 gallons (3,785 liters), reinforced concrete support pads are recommended. Regardless of size, the base material must be designed to support the tank's bearing capacity, including seismic and wind loads. If the tank is on a stand or skid, the concrete or soil's bearing capacity requirements will increase. Always anchor the tank according to seismic or wind load zone requirements for the site. Consult applicable building codes for the specific support and anchoring requirements.

Do you manufacture tanks made from Nylon materials?
Nylon has become a popular material in the rotational molding industry due to its notable properties. It is best known for its strength, resistance to creep and fatigue, and

ability to withstand high service temperatures. Nylon also offers excellent chemical resistance to a wide range of substances, including gasoline and diesel fuel. Elkhart Plastics can manufacture tanks made from Nylon in sizes up to 20 gallons.

Can I paint my tank?
Elkhart Plastics does not endorse the use of products claiming successful adhesion to polyethylene. While paints with adhesion promoters may initially adhere, they will eventually peel due to polyethylene's high thermal expansion and contraction. This thermal instability inherent to polyethylene leads to long-term adhesion failure, undermining the effectiveness of such paint products.

Chemical Resistance Chart for HDPE

The Chemical Resistance Data Chart is a reference only to determine whether the chemical stored is compatible with high density polyethylene. Be sure to consider the temperature limitations specific to your

application. It is ultimately up to you to work with your chemical manufacturer for storage recommendations. If the chemical you intend to store is not listed in the resistance data, contact the chemical manufacturer for storage recommendations regarding polyethylene tanks.

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Chemical Resistance of Polyethylene

Chemical or Solvent	Concentration	LDPE & MDPE		HDPE Resins	
		70°F	140°F	70°F	140°F
Acetaldehyde	100%	O	U		
Acetic Acid (Glacial)	Conc.	O	U		
Acetic Anhydride		U	U		
Acetic Acid	1-10%	S	S		
Acetic Acid	10-60%	S	O		
Acetic Acid	80-100%	O	U		
Acetone		S	S	S	S
Acetone	100%	U	U		
Acrylic Emulsions		S	S	S	S
Allyl Alcohol		U	U		
Allyl Chloride		U	U		
Aluminum Chloride	Dilute	S	S	S	S
Aluminum Chloride	Conc.	S	S	S	S
Aluminum Fluoride	Conc.	S	S	S	S
Aluminum Hydroxide	Conc.	S	S		
Aluminum Sulfate	Conc.	S	S	S	S
Alums (all types)	Conc.	S	S	S	S
Ammonia	100% Dry Gas	S	S	S	S
Ammonium Carbonate		S	S	S	S
Ammonium Chloride	Sat'd	S	S	S	S
Ammonium Carbonate	Conc.	S	S		
Ammonium Chloride	Sat'd	S	S		
Ammonium Fluoride	20%	S	S	S	S
Ammonium Hydroxide		S	S	S	S
Ammonium Hydroxide	35%	S	S		
Ammonium Metaphosphate	Sat'd	S	S	S	S
Ammonium Nitrate	Sat'd	S	S	S	S
Ammonium Persullitt	Sat'd	S	S	S	S
Ammonium Persulfate	Sat'd	S	S		
Ammonium Sulfate	Sat'd	S	S	S	S
Ammonium Sulfide	Sat'd	S	S	S	S
Ammonium Thiocyanate	Sat'd	S	S		
Ammonium Thiocyanst	Sat'd	S	S	S	S
Amyl Acetate	100%	U	U	O	U
Amyl Alcohol	100%	S	S	S	S
Amyl Chloride	100%	U	U		

S = satisfactory (no attack) O = slight attack U = unsatisfactory 70°F = 21°C, 140°F = 60°C

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		70°F	140°F	70°F	140°F
Aniline	100%	S	U	S	
Aniline Hydrochloride	Sat'd		U		
Antimony Chloride		U	U		U
Aqua Acid		U	U		
Aqua Regis		O	U	O	U
Arsenic Acid	100%	S	S		
Barium Carbonate	Sat'd	S	S	S	S
Barium Chloride	Sat'd	S	S	S	S
Barium Hydroxide	Sat'd	S	S		
Barium Sulfide	Sat'd	S	S	S	S
Beer		S	S	S	
Benzene		U	U	O	U
Benzene Sulfonic Acid		S	S	S	S
Benzoic Acid	Sat'd	O	O		
Benzoic Acid	All Conc.	S	S		
Benzene Sulfonic Acid		S	S		
Bismuth Carbonate	Sat'd	S	S	S	S
Black Liquor		S	S	S	S
Bleach Lye	10%	S	S	S	S
Borax	Sat'd	S	S		
Borax	Cold Sat'd	S	S		
Boric Acid	Conc.	S	S	S	S
Boric Acid	Dilute	S	S	S	S
Bromic Acid	10%	S	S		
Bromic Acid	100%	U	U		
Borax Cold	Sat'd	S	S	S	S
Bromic Acid	10%	S	S	S	S
Bromine Liquid	100%	U	U	O	U
Bromine Water		U	U		
Butanediol	100%	S	S		
Butanediol	60%	S	S		
Butanediol	10%	S	S		
Butyl Alcohol	100%	S	S		
Butyric Acid	Conc.	U	U		
Calcium Bisulfide		S	S	S	S

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		70°F	140°F	70°F	140°F
Calcium Carbonate	Sat'd	S	S	S	S
Calcium Chlorate	Sat'd	S	S	S	S
Calcium Chloride	Sat'd	S	S	S	S
Calcium Hydroxide	Sat'd	S	S		
Calcium Hydroxide		S	S	S	S
Calcium Hypochlorite	Bleach Sol'n	S	S	S	S
Calcium Nitrate	Sat'd	S	S		
Calcium Nitrate	50%	S	S	S	S
Calcium Sulfate		S	S	S	S
Camphor Oil		U	U		
Carbon Dioxide	100% Dry	S	S	S	S
Carbon Dioxide	100% Wet	S	S	S	S
Carbon Dioxide	Cold Sat'd	S	S	S	S
Carbon Disulfide		U	U		
Carbon Disulphide		U	U		U
Carbon Monoxide		S	S	S	S
Carbon Tetrachloride		U	U	U	U
Carbonic Acid		S	S	S	S
Caster Oil	Conc.	S	S		
Chloracetic Acid	100%	U	U		
Chlorine Moist Gas		O	U		
Chlorine Liquid		U	U	O	U
Chlorine Water	2% Sat'd Sol	U	U		
Chlorobenzene		U	U	O	U
Chloroform	100%	U	U	U	U
Chlorosulfonic Acid		U	U	U	U
Chrome Alum	Sat'd	S	S	S	S
Chromic Acid	10-20%	S	O	S	O
Chromic Acid	20%	S	S		
Chromic Acid & Sulfuric Acid		S	O		
Chromic Acid	50%	S	O	S	O
Cider		S	S	S	S
Citric Acid	Sat'd	S	S	S	S
Coconut Oil Alcohols		S	S	S	S
Cola Concentrates		S	S		

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		70°F	140°F	70°F	140°F
Copper Chloride	Sat'd	S	S	S	S
Copper Cyanide	Sat'd	S	S		
Copper Fluoride	2%	S	S	S	S
Copper Nitrate	Sat'd	S	S	S	S
Copper Sulfate	Dilute	S	S	S	S
Copper Sulfate	Sat'd	S	S	S	S
Cottonseed Oil	100%	S	S		
Cottonseed Oil		S	S	S	S
Cresol	100%	U	U		
Cresylic Acid	50%	S	S		
Cuprous Chloride	Sat'd	S	S	S	S
Cyclohexane	100%	U	U		
Cyclohexanone		U	U	U	U
Cyclohexanol	100%	S	S		
Detergents, Synthetic		S	S	S	S
Developers Photographic		S	S	S	S
Dextrin	Sat'd	S	S	S	S
Dextrose	Sat'd	S	S	S	S
Diazo Salts		S	S		
Dibutylphthalate		O	O		
Diethylene Glycol	100%	O	U		
Diethylene Glycol		S	S	S	S
Diglycolic Acid		S	S		
Dimethylamine		U	U		
Dioctyl Phthalate		O	U		
Disodium Phosphate	Sat'd	S	S		
Emulsions, Photographic		S	S		
Ethyl Acetate	100%	O	O	O	O
Ethyl Alcohol	35%	S	S	S	S
Ethyl Alcohol	100%	S	S	S	S
Ethyl Butyrate	100%	O	U		
Ethyl Chloride		U	U	O	U
Ethyl Ether	100%	U	U		
Ethylene Chloride		U	U		

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		70°F	140°F	70°F	140°F
Ethylene Chlorohydrin		U	U		
Ethylene Dichloride		U	U		
Ethylene Glycol		S	S	S	S
Ferric Chloride	Sat'd	S	S	S	S
Ferric Nitrate	Sat'd	S	S	S	S
Ferric Sulfate	Sat'd	S	S		
Ferrous Chloride	Sat'd	S	S	S	S
Ferrous Sulfate		S	S	S	S
Fish Solubles		S	S		
Fluoboric Acid		S	S		
Fluorine		S	U		
Fluosilicic Acid	32%	S	S		
Fluosilicic Acid	Conc.	S	O		
Fluoboric Acid		S	S	S	S
Fluorine		S	U	S	U
Fluosilicic Acid	32%	S	S	S	S
Fluosilicic Acid	Conc.	S	O	S	S
Formaldehyde	40%	S	S	S	
Formic Acid	20%	S	S	S	S
Formic Acid	50%	S	S	S	S
Formic Acid	100%	S	S	S	S
Fructose	Sat'd	S	S	S	S
Fruit Pulp		S	S		
Fuel Oil		O	U	S	U
Furfural	100%	U	U	O	U
Furfuryl Alcohol		U	U		
Gallic Acid	Sat'd	S	S	S	S
Gasoline		U	S	U	
Gin		U	U		
Glucose		S	S	S	S
Glycerine		S	S	S	S
Glycol		S	S	S	S
Glycolic Acid	30%	S	S	S	S
Grape Sugar	Sat'd Aq.	S	S		
Heptane	100%	U	U		

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		70°F	140°F	70°F	140°F
Hydrobromic Acid	50%	S	S	S	S
Hydrocyanic Acid	Sa'd	S	S	S	S
Hydrochloric Acid	10%	S	S	S	S
Hydrochloric Acid	30%	S	S	S	S
Hydrochloric Acid	35%	S	S	S	S
Hydrochloric Acid	Conc.	S	S	S	S
Hydrofluoric Acid	40%	S	S	S	S
Hydrofluoric Acid	60%	S	S	S	S
Hydrofluoric Acid	75%	S	O	S	S
Hydroflurosllicic	31.1%	S	S		
Hydrogen	100%	S	S	S	S
Hydrogen Bromide	10%	S	S	S	S
Hydrogen Chloride Gas	Dry	S	S	S	S
Hydrogen Peroxide	30%	S	O	S	S
Hydrogen Peroxide	90%	S	U	S	O
Hydrogen Phosphide	100%	S	S		
Hydrogen Sulfide		S	S	S	S
Hydroquinone		S	S	S	S
Hypochlotous Acid	Conc.	S	S	S	S
Inks		S	S	S	S
Iodine (in KI Sol'n)		O	U		
Lactic Acid	10%	S	S	S	S
Lactic Acid	90%	S	S	S	S
Lead Acetate	Sat'd	S	S	S	S
Latex	100%	S	S		
Lead Acetate	Sat'd	S	S		
Lead Tetra-Ethyle	100%	S			
Linseed Oil		O	U		
Lube Oil		O	U		
Magnesium Carbonate	Sat'd	S	S	S	S
Magnesium Chloride	Sat'd	S	S	S	S
Magnesium Hydroxide	Sat'd	S	S	S	S

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		70°F	140°F	70°F	140°F
Magnesium Nitrate	Sat'd	S	S	S	S
Magnesium Sulfate	Sat'd	S	S	S	S
Maleic Acid	Sat'd	S	S		
Mercuric Chloride	Sat'd	S	S		
Mercuric Cyanide	Sat'd	S	S	S	S
Mercurous Nitrate	Sat'd	S	S		
Mercury		S	S	S	S
Methyl Alcohol	100%	S	S	S	S
Methyl Bromide		O	U	O	
Methyl Chloride		O	U		
Methyl Ethyl Ketone	100%	U	U	U	U
Methylene Chloride	100%	U	U	U	U
Methylsufuric Acid		S	S	S	S
Milk		S	S		
Mineral Oils		O	U	S	U
Molasses	Comm.	S	S		
Naphtha	100%	S	U		
Naphtha	100%	S	U		
Naphthalene		U	U		
Nickel Chloride	Sat'd	S	S	S	S
Nickel Nitrate	Con.	S	S	S	S
Nickel Nitrate	Conc.	S	S		
Nickel Sulfate	Sat'd	S	S	S	S
Nicotinic Acid	100%	S	S		
Nitric Acid	0-30%	S	S	S	S
Nitric Acid	30-50%	S	O	S	O
Nitric Acid	70%	S	O	S	O
Nitric Acid	95-98%	U	U	U	U
Nitrobenzene	100%	U	U	U	U
Octyl Cresol		O	U		
Oils and Fats		O	U		
Oleic Acid	Conc.	O	U		
Oleum	Conc.	U	U	U	U
Orange Extract	Dilute	S	S		
Oxalic Acid	Dilute	S	S	S	S

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		70°F	140°F	70°F	140°F
Oxalic Acid	Sat'd	S	S	S	S
Oxygen	100%	S			
Ozone	100%	O	U		
Perchloric Acid	10%	S	S		
Petroleum Ether		U	U	U	U
Phenol	90%	U	U		
Phosphoric Acid	0-30%	S	S	S	S
Phosphoric Acid	Over 30%	S	S	S	S
Phosphoric Acid	90%	S	U	S	S
Phosphorus (Yellow)	100%	S			
Phosphorus Pentoxide	100%	S	S		
Phosphorus Trichloride		S			
Photographic Solutions		S	S	S	S
Pickling Baths					
Hydrochloric Acid		S	S		
Sulfuric Acid		S	S		
Sulfuric-Nitaric		S			
Pickling Baths,					
Sulfuric Acid		S	S	S	S
Hydrochloric Acid		S	S	S	S
Sulfuric-Nitric		S		S	U
Picric Acid	1%	S	O		
Plating Solutions					
Brass		S	S		
Cadmium		U	U		
Chromium		S	S		
Copper		S	S		
Gold		S	S		
Indium		S	S		
Lead		S	S		
Nickel		S	S		
Rhodium		S	S		
Silver		S	S		
Tin		S	S		
Zinc		S	S		

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Chemical or Solvent	Concentration	LDPE & MDPE		HDPE Resins	
		70°F	140°F	70°F	140°F
Plating Solutions					
Brass		S	S		
Cadmium		U	U		
Chromium		S	S		
Copper		S	S		
Gold		S	S		
Indium		S	S		
Lead		S	S		
Nickel		S	S		
Rhodium		S	S		
Silver		S	S		
Tin		S	S		
Zinc		S	S		
Plating Solutions					
Brass		S	S	S	S
Cadmium		S	S	S	S
Chromium		U	U		
Copper		S	S	S	S
Gold		S	S	S	S
Indium		S	S	S	S
Lead		S	S	S	S
Nickel		S	S	S	S
Rhodium		S	S	S	S
Silver		S	S	S	S
Tin		S	S	S	S
Zinc		S	S	S	S
Potassium Bicarbonate	Sat'd	S	S	S	S
Potassium Borate	1%	S	S	S	S
Potassium Bromate	10%	S	S	S	S
Potassium Bromide	Sat'd	S	S	S	S
Potassium Carbonate		S	S	S	S
Potassium Chlorate	Sat'd	S	S	S	S
Potassium Chloride	Sat'd	S	S	S	S
Potassium Chromate	40%	S	S	S	S
Potassium Cyanide	Sat'd	S	S	S	S
Potassium Dichromate	40%	S	S	S	S
Potassium Ferricyanide	Sat'd	S	S		

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Equistar Technical Tip

tech.topic

Chemical Resistance of Polyethylene

Chemical or Solvent	Concentration	LDPE & MDPE		HDPE Resins	
		70°F	140°F	70°F	140°F
Potassium Ferri/Ferro Cyanide		S	S	S	S
Potassium Fluoride		S	S	S	S
Potassium Hydroxide	20% Conc.	S	S	S	S
Potassium Nitrate	Sat'd	S	S	S	S
Potassium Petborate	Sat'd	S	S	S	S
Potassium Perchlorate	Sat'd	S	S		
Potassium Perchlorate	10%	S	S	S	S
Potassium Permanganate	20%	O	U		
Potassium Persulfate	Sat'd	S	S		
Potassium Sulfate	Conc.	S	S	S	S
Potassium Sulfide	Conc.	S	S	S	S
Potassium Sulfite	Conc.	S	S	S	S
Potassium Persullate	Sat'd	S	S	S	S
Propargyl Alcohol		S	S	S	S
Propyl Alcohol		S	S	S	S
Propylene Dichloride	100%	U	U		
Propylene Glycol		S	S	S	S
Rayon Coagulating Bath		S	S	S	S
Sea Water		S	S	S	S
Selenic Acid		S	S		
Shortening		S	S	S	S
Silicic Acid		S	S	S	S
Silver Nitrate Sol'n		S	S	S	S
Soap Solution	Conc.	S	S	S	S
Sodium Acetate	Sat'd	S	S	S	S
Sodium Benzoate	35%	S	S	S	S
Sodium Bicarbonate	Sat'd	S	S	S	S
Sodium Bisulfate	Sat'd	S	S	S	S
Sodium Bisulfite Sat'd	Sat'd	S	S	S	S
Sodium Borate		S	S	S	S
Sodium Bromide Oil Sol'n		S	S	S	S
Sodium Carbonate	Conc.	S	S	S	S
Sodium Chlorate	Sat'd	S	S	S	S
Sodium Chloride	Sat'd	S	S	S	S
Sodium Cyanide		S	S		

S = satisfactory (no attack) O = slight attack U = unsatisfactory 70°F = 21°C, 140°F = 60°C

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		70°F	140°F	70°F	140°F
Sodium Cyanide		S	S	S	S
Sodium Dichromate	Sat'd	S	S	S	S
Sodium Ferricyanide	Sat'd	S	S	S	S
Sodium Fluoride	Sat'd	S	S	S	S
Sodium Hydroxide	Conc.	S	S	S	S
Sodium Hypochlorite		S	S	S	S
Sodium Nitrate		S	S	S	S
Sodium Sulfate		S	S	S	S
Sodium Sulfide	25%	S	S		
Sodium Sulfide	Sat'd Sol'n	S	S		
Sodium Sulfide	25% to Sat'd	S	S	S	S
Sodium Sulfite	Sat'd	S	S	S	S
Stannic Chloride	Sat'd	S	S	S	S
Stannous Chloride	Sat'd	S	S	S	S
Starch Solution	Sat'd	S	S	S	
Stearic Acid	100%	S	S	S	
Sulfur	Colloidal	S			
Sulfur Dioxide	Dry, 100%	S	S		
Sulfur Dioxide	Wet, 100%	S			
Sulfur Trioxide		S	S		
Sulfuric Acid	0-50%	S	S	S	S
Sulfuric Acid	70%	S	O	S	O
Sulfuric Acid	80%	S	U	S	U
Sulfuric Acid	96%	O	U	O	U
Sulfuric Acid	98% Conc.	O	U	O	U
Sulfuric Acid Fuming		U	U	U	U
Sulfurous Acid		S	S	S	S
Tallow		S	O		
Tannic Acid	10%	S	S	S	S
Tanning Extracts	Comm.	S	S		
Tartaric Acid	10%	S	S		
Tartaric Acid	Sat'd	U	U		
Tetralin		U	U		
Tetrahydrofuran	100%	U	U		
Toluene		U	U	U	U
Tetrachloroethylene	100%	U	U		

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		70°F	140°F	70°F	140°F
Tetrahydrofurane		O	O	O	O
Transformer Oil		O	U	S	O
Trichloroacetic Acid	10%				
Trichloroethylene		U	U	U	U
Triethanolamine	100%	S	U		
Trisodium Phosphate	Sat'd	S	S		S
Turpentine		S	U		
Urea	Upt to 30%	S	S		
Urea		S	S	S	
Urine		S	S	S	S
Vinegar	Comm.	S	S	S	S
Vanilla Extract		S	S		
Wetting Agents		S	S	S	S
Whiskey		S	S	S	
Wines		S	S	S	S
Xylene		U	U	U	U
Yeast		S	S	S	S
Zinc Chloride	Sat'd	S	S	S	S
Zinc Sulfate	Sat'd	S	S	S	S

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LYONDELL

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Specific Gravity Conversion Chart

Contact your chemical manufacturer or distributor to determine the specific gravity of your liquid.

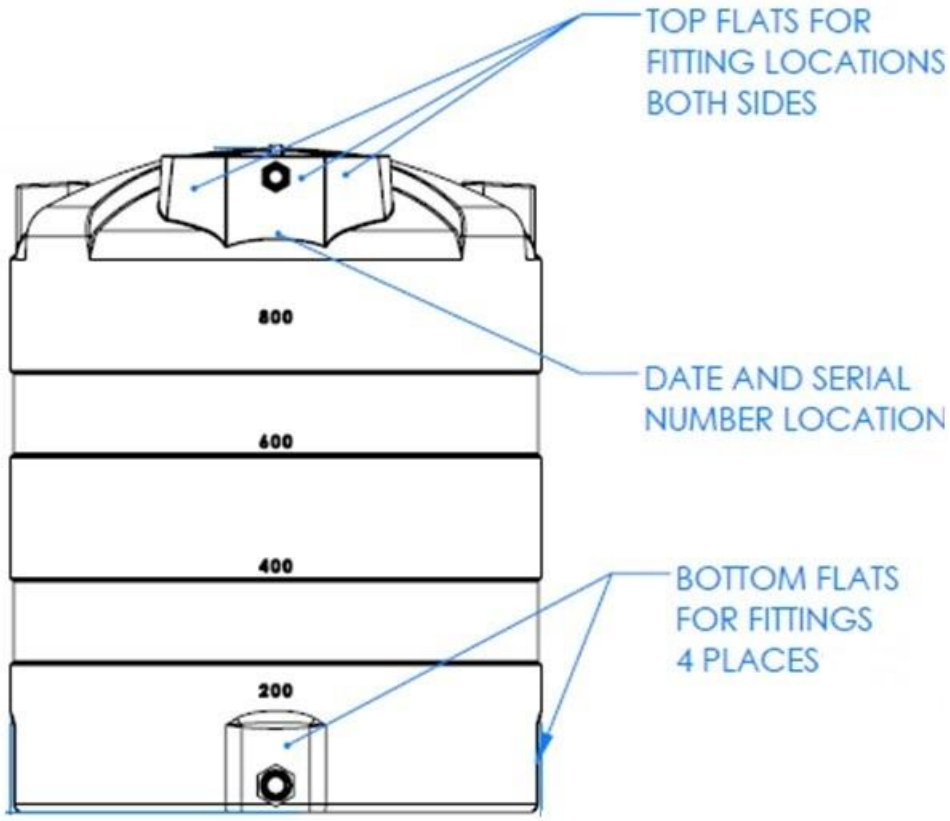
Below is a chart demonstrating how specific gravity is calculated with examples. The following information is for demonstration purposes only.

Material Weight in lbs./gallon	Specific Gravity
8	0.96
9	1.08
10	1.20
11	1.32
12	1.44
13	1.56
14	1.68
15	1.80
16	1.92
17	2.04

Examples of Specific Gravity

Material	Material Weight in lbs./gallon	Specific Gravity
Brine	**6.14**	**0.74**
Water	**8.33**	**1.00**
Ferric Chloride	**11.75**	**1.41**
Sodium Hydroxide	**17.74**	**2.13**

Date Stamp Location



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