assmann-usa.com

CHEMICAL STORAGE RECOMMENDATIONS
FROM ASSMANN CORPORATION OF AMERICA

ALUMS + POLYMERS

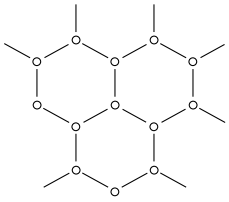
Alums and Polymers are commonly used to treat water and wastewater. Separation, settling, and coagulation are common issues with these chemicals. The right storage solution is imperative for user safety as well as prolonged chemical integrity. Alums are a class of double sulfate salts, frequently used in water treatment, paper and pulp manufacturing, and textile industries. Polymers represent a broad class of compounds, and their chemical structure varies based on the specific polymer in use. Common synthetic polymers include polyethylene, polypropylene, and polyvinyl chloride (PVC). Polymers are used in a wide variety of applications, including plastic manufacturing, coating, adhesives, and more. Additionally, polymers are supplied in various forms such as granules, pellets, or liquids.

The most common alum is aluminum potassium sulfate, known as Potassium Alum with the chemical formula $KAI(SO^4)^2$. Though generally stable compounds, Alums should be stored in a cool, dry, and well-ventilated area to prevent moisture absorption. For solutions catered to your specific industry, speak with our storage experts. Polymer storage conditions vary depending on the type of polymer. Some polymers are sensitive to temperature, humidity, and UV exposure. We have storage solutions to accommodate for each specific need.

ASSMANN POLYETHYLENE TANKS ARE NSF CERTIFIED

Assmann Corporation is the only manufacturer that has NSF certification for our Crosslink polyethylene in chemical storage applications. Other storage tank manufacturers do not carry the NSF certification on Crosslink polyethylene without the use of expensive liners, or they simply have potable water certification and do not have chemical certification. While selecting your storage tank, consider if NSF certification is required.

NSF
Certified to NSF/ANSI 61



Assmann's Crosslink polyethylene has a much higher softening point than conventional linear polyethylene. Crosslink also has a much higher impact resistance.

Assmann recommends that tanks be constructed of Linear or Crosslink Polyethylene. Assmann requires that tanks be rated for 1.5 or 1.9 Specific Gravity. All connections below liquid level must prevent chemicals from contacting the tank wall cross section. At Assmann, we can provide distinct storage solutions for a variety of specific Alums. Depending on the use for your industry, we can create a custom built storage solution to accommodate for all your storage needs. For polymer storage, our tanks provide UV protection, and we offer additional temperature-regulatory accessories to keep the contents in optimal storage.

ALUMS + POLYMERS

Specific Gravity	Resin	Fitting Material	Gasket Material	Hardware
1.5 - 1.9	Linear or Crosslink	PVC	Consult Chemical Provider*	Stainless Steel

**Gasket compatibility can become an issue with some Polymers. Assmann recommends consulting your chemical provider for requirements.*

LINEAR OR CROSSLINK POLYETHYLENE DOUBLE WALL TANKS

The inner tank dome overlaps the outer tank sidewall to help prevent rainwater, snow, and debris from entering the containment basin, making them among our most safe tanks. Molded-in upper and lower fitting flats are standard. We can customize these tanks with either a top suction or sturdy designed bottom outlet. All double wall containment tanks are designed with wall thicknesses equal to or greater than that required by ASTM D-1998 standards.

VENTING

Venting polyethylene storage tanks is one of the most overlooked steps in storage solutions. However, proper venting is crucial to maintaining safety, especially when storing highly corrosive chemicals. We cannot stress how important it is that polyethylene tanks are not over-pressurized or placed under a vacuum. Our storage experts can help identify the right venting solution for your storage needs. Vent size will always be based on flow and delivery rates, but you can never have too much venting.

MANWAYS

Our most common cover, Assmann's 16" Lever Lock lids can be molded on most tanks sized between 200 and 4000 gallons. Designed with a flanged neck so the lid snap fits over — with an additional cam style lock for security — this system is a proven solution for many of our customers.

JOINTS

Flexible hoses or expansion joints must be used on all lower ½ sidewall connections. A lightweight isolation valve is permitted prior to the flexible joint. All piping must be supported independently of the tank. Pipe supports must be installed after the flexible joint to allow the tank to expand and contract under normal service conditions. Polyethylene tanks expand and contract both laterally and vertically; expansion hose or joint must accommodate this expansion.

FITTINGS

Our experts recommend PVC for fitting materials. For gasket materials, our experts recommend consulting your chemical provider, as gasket compatibility can become an issue with some polymers. All connections below liquid level must prevent chemicals from contacting the tank wall cross section. Bulkhead-style connections can be used on tanks 2,000 gallons and below. The sidewall connections of tanks above 2,000 gallons should be 316 Stainless Steel construction. Flange style fittings are not recommended for Ferrous Chloride. There are no restrictions on dome fittings.

SECONDARY CONTAINMENT

Proper design of storage solutions should include adequate containment in case of tank failure. Containment should be adequate in capacity and suitable for Alums & Polymers. Typically, containment basins are sized to a minimum of 110% of the primary tank's capacity. Assmann offers both secondary containment basins and double walled tanks to meet containment requirements. Customers are responsible for checking local regulations to meet secondary containment requirements, as well as ensuring that all coatings and linings are compatible.

Quality: First and Forever

Assmann polyethylene bulk storage tanks are built the right way – even if that's not the easiest or fastest way. We're the only manufacturer who uses non-shielded molds with low temperature heat and gradual air cooling. The result is truly uniform wall thickness, unparalleled certified quality, and reliability that proves itself every time and across decades.

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