

A person in a dark blue long-sleeved shirt is seen from behind, reaching up to a red pegboard in a workshop. The pegboard is filled with various tools like wrenches, sockets, and a blue torque wrench. The background is a white pegboard with more tools hanging on it.

CHEMICAL STORAGE RECOMMENDATIONS  
FROM ASSMANN CORPORATION OF AMERICA

# LIQUID AMMONIUM SULFATE

**Liquid Ammonium Sulfate (LAS) is most often used in combination with chlorine for disinfection.** Municipal and industrial water and wastewater treatment for disinfection as a source of ammonia in chlorination — Millions of people drink water cleaned through that process. Additionally, agriculture industries use LAS as a fertilizer to provide nitrogen and sulfur to crops. Though temperature is not a primary concern when storing Liquid Ammonium Sulfate, this chemical should be stored in a cool, dry, well-ventilated area,

away from moisture and incompatible substances. Additionally, storage solutions should account for specific solutions of chemicals. Solutions of 40% are the most common usage for LAS.

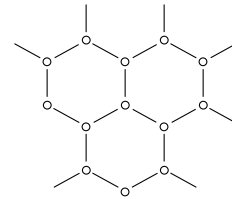
Special considerations should be made when choosing the correct storage tank for this application. This document is to be used as a guideline for selecting the best options for your Assmann Polyethylene Tank.

## 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.



Certified to  
NSF/ANSI 61



### Assmann recommends that tanks be constructed of Linear or Crosslink Polyethylene, either singular or double walled.

Assmann requires that tanks be rated for a minimum of 1.9 Specific Gravity for 40% LAS solutions. All connections below liquid level must prevent chemicals from contacting the tank wall cross section.

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

## LIQUID AMMONIUM SULFATE

Specific Gravity	Resin	Fitting Material	Gasket Material	Hardware
1.9 @ 40% Solution	Crosslink	PVC, 316L SS	EPDM	316L SS



## **LINEAR OR CROSSLINK POLYETHYLENE SINGLE WALL TANKS**

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Assmann single wall storage tanks are rotationally molded from your choice of virgin high density crosslink or FDA-compliant linear polyethylene. Assmann tanks are semi-translucent with gallon markers and are designed with wall thickness that meets ASTM D-1998 standards for liquid storage.

## **MANWAYS**

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Assmann manways are available in 16", 22", and 24" sizes depending on tank model. Manways should be used when tanks are pneumatically filled by tanker trucks or when there are high delivery flows. We also offer bolted and gasketed covers for indoor applications where hazardous fumes need to be restricted.



## **VENTING**

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Venting polyethylene storage tanks is one of the most overlooked steps in storage solutions. 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.



## FITTINGS

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Our experts recommend the following fitting materials of construction: PVC or Stainless Steel for nozzles, EPDM material for Gaskets, and 316 Stainless Steel for metallic fittings and hardware. 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 LAS. There are no restrictions on dome fittings.

## JOINTS

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**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.







## SECONDARY CONTAINMENT

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Proper design of storage solutions should include adequate containment in case of tank failure. Containment should be adequate in capacity and suitable for LAS. 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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**Certificate Number:**  
DAS 90024930/39/Q Rev: 001

