

A photograph of a worker in a light blue shirt and cap operating a large industrial machine in a factory. The machine has a control panel with a screen and various buttons. The worker is standing to the right of the machine, looking at the control panel. The machine is blue and has a large cylindrical component in the center. The background shows other industrial equipment and pipes.

CHEMICAL STORAGE RECOMMENDATIONS
FROM ASSMANN CORPORATION OF AMERICA

HYDROFLUOSILICIC ACID

Hydrofluosilicic Acid (H_2SiF_6), otherwise known as Fluorosilicic Acid or Silicofluoride, is primarily used in municipal water treatment as fluoridation. Common solution concentrations vary, but it is typically used in the form of a diluted solution containing around 25-30%. Temperature is not a significant concern when storing Hydrofluosilicic Acid. However, this chemical is corrosive and can react violently with bases.

That means you'll need the right storage tank to store Hydrofluosilicic Acid safely.

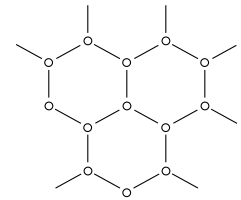
For professionals who depend on this chemical to do their work, special considerations should be made when choosing the correct storage tank for this application. This document is to be used as a guideline for selecting the best options for your Assmann Polyethylene Tank.

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, and double walled. Assmann requires that tanks be rated for a minimum of 1.9 Specific Gravity. 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.

HYDROFLUOSILICIC ACID

Specific Gravity

1.9

Resin

Crosslink

Fitting Material

Polypropylene

Gasket Material

Viton

Hardware

Hastelloy



LINEAR OR CROSSLINK POLYETHYLENE DOUBLE WALL TANKS

Double wall plastic tanks provide the best protection against spills, making it the safest option for Hydrofluosilicic Acid.

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

Assmann offers manway covers specifically designed to help minimize toxic fumes. Our bolted and gasketed manway covers are available in 16", 22", and 24" sizes depending on tank model. These covers include chemical resistant bolts that compress an XLPE foam gasket between the tank wall and a rigid cover. These manways should be used on any application where fumes need to be restricted from leaving the storage tank.



FITTINGS

Our experts recommend the following fitting materials of construction: Polypropylene (PP) for nozzles, Viton material for Gaskets, and Hastelloy 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. There are no restrictions on dome fittings.

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.





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 Hydrofluosilicic Acid. 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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