

Sulfuric Acid (H₂SO₄) Storage Tanks for Concentrations ≥ 80%

Tank:

SAFE-TANK® of crosslinked polyethylene with OR-1000™

- Up to 8700 gallons
- 2.2 spg rating for primary tank
- 1.9 spg rating for secondary tank

Non SAFE-TANK® alternatives:

- 1000 to 6600 gallons: vertical, flat bottom tank, crosslinked polyethylene with OR-1000™, 2.2 spg rating
- Up to 1000 gallons: vertical, flat bottom tank, crosslinked polyethylene, 1.9 spg rating
- IMFO® is available for full drainage (limit one per tank)

Secondary Containment: REQUIRED

SAFE-TANK® secondary tank of crosslinked polyethylene with 1.9 spg rating

Non SAFE-TANK® alternatives

- PPC secondary containment basin of crosslinked polyethylene
- Other secondary containment suitable for sulfuric acid and of adequate size

Fittings:

Sidewall:

- 3" maximum size on the lower 1/3 sidewall
- Fitting must keep sulfuric acid from contacting tank wall cross section

Dome: No restrictions

Fitting Material of Construction:

- Concentrations ≥ 93%: PVC & CPVC (schedule 80), 316 ss or higher, Alloy C-276
- Concentrations 80% - 92%: PVC & CPVC (schedule 80), Alloy C-276, DO NOT use stainless steel

Gasket Material of Construction: Latharge Viton

Plumbing to the tank:

Required use of **flexible connections** with fittings on lower 1/3 of sidewall

- Allows for lateral and vertical expansion and contraction of the tank
- Reduces pump and piping vibration stress on the tank

Flexible connections, piping, and valves must have structural support independent of tank sidewall and dome

Venting:

Venting Requirements For Polyethylene Tanks									
Mechanical Pump Fill	Pneumatic Fill								
IF ≤ 1000 gallons	IF - Vent length ≤ 3 feet			IF - Vent length > 3' and ≤ 30'			IF - Scrubber Application		
Vent size should equal size of largest fill or discharge fitting	AND - Vent screen mesh size ≥ 1/4" or no screen used			AND - 3 or less 90° elbows with no other restrictions or reduction in pipe size			Vent pipe size throughout scrubber system CANNOT be reduced!		
							Centerline of dispersion pipe not to be submersed > 6 inches		
IF > 1000 gallons	Emergency Pressure Relief Cover Required			Emergency Pressure Relief Cover Required			Perforated dispersion pipe must be same diameter or larger, as vent. Sum of perforations ≥ cross sectional area of pipe		
	Tanker Discharge	Inlet/Fitting Size	Minimum Vent Size	Tanker Discharge	Inlet/Fitting Size	Minimum Vent Size	Tanker Discharge	Inlet/Fitting Size	Minimum Vent Size
	2"	2"	4"	2"	2"	6"	2"	2"	6"
	3"	2"	6"	3"	2"	6"	3"	2"	8"
Vent size should exceed the largest fill or discharge fitting by 1 inch	3"	3"	6"	3"	3"	8"	3"	3"	10"

(2) 2 inch vents **DO NOT EQUAL** 4 inch venting capacity

For detailed venting guidelines, please visit our Technical Resources at www.polyprocessing.com

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Foundation and Restraints:

Smooth concrete, asphalt, or steel foundation

No restraint or ladder attachment bands circumscribing the tank are allowed; cable restraint systems must pass cables over the top of the tank or utilize molded-in lifting lugs when appropriate.

Temperature:

Product should not exceed 100 degrees F at delivery or during storage