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www.polyprocessing.com

Sodium Hydroxide.

Defying a chemical that "finds" leaks.

NaOH
SODIUMHYDROXIDE

Also known as caustic soda or liquid lye, sodium hydroxide is used to adjust pH in water and wastewater treatment and in the manufacture of chemicals, rayon, cellophane, pulp and paper, aluminum, detergents, soaps and a wide range of other products. As for storage:

- Sodium hydroxide is a "slippery" chemical that tries to find leak paths
- This chemical is extremely corrosive to tissue. It is also highly toxic if ingested.
- If sodium hydroxide is not kept at a specific temperature, it will crystallize and go solid

A tank system and proper fittings from Poly Processing can reduce your risk with this hazardous chemical.

California
8055 S. Ash St.
French Camp, CA 95231

Louisiana
P.O. Box 4150
2201 Old Sterlington Rd.
Monroe, LA 71203
Tel: 866-765-9957
sales@polyprocessing.com
www.polyprocessing.com

Virginia
161 McGhee Rd.
Winchester, VA 22603

NaOH
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The Poly Processing Sodium Hydroxide System

The key to storing sodium hydroxide properly is strong, safe containment. Since the chemical is so corrosive, secondary containment is an absolute.

If secondary containment is already available, the IMFO® tank is recommended. IMFO® systems are ideal for Sodium Hydroxide Systems, since their flange is actually a molded part of the tank, not an insert that could leak or fail. The IMFO® also **ensures long-term performance of the overall system**, since it eliminates the need to drill into the sidewall of the tank and install a mechanical fitting, which can create a maintenance issue for this chemical.

When secondary containment is not available, a SAFE-Tank® can meet this requirement. This "tank within a tank" extends the margin of safety by providing a system with **110% secondary containment**.

The tank's high-density crosslinked polyethylene construction means greater strength. It is so strong, in fact, that Poly offers a **warranty of five full years** on all tanks.

CHEMICAL	RESIN TYPE	SPECIFIC GRAVITY RATING	FITTING MATERIAL	GASKET MATERIAL	BOLT MATERIAL
Sodium Hydroxide 50%	XLPE	1.65	PVC	EPDM	316SS

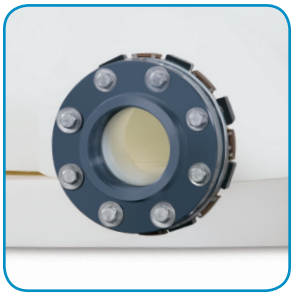
»» See our website for a complete Chemical Resistance Chart.

Tank Specifications

- **IMFO®** system completely eliminates the need for a mechanical fitting, which means reduced maintenance. (Recommended where secondary containment is already available)
- **SAFE-Tank®** design greatly reduces the risk of leaking for this highly corrosive chemical. (Recommended where secondary containment is not available)
- **High-density crosslinked polyethylene (XLPE)** construction ensures strength to match this aggressive substance.

Recommended System Components

Secondary containment:
Recommended.
Alternative: PPC secondary containment rectangular or cylindrical basin of XLPE, or SAFE-Tank® if concrete containment is not available



Fittings:
IMFO® eliminates the need for confined space entry.

Plumbing:
Requires flexible connections to allow for lateral and vertical tank contraction and expansion and to reduce vibration stress

Venting:
SAFE-Surge™ manway cover is recommended on pneumatically loaded systems to support tank longevity.

The above components are just a few of the many options offered by Poly Processing. See our website or talk to your Poly Processing representative to find out more.

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Technical Overview:

Tank Specifications & Technical Overview

IMFO® VERTICAL FLAT BOTTOM OF XLPE:

- 230–15,500 gallons
- 1.65 spg rating

NON-IMFO® ALTERNATIVES:

SAFE-Tank® XLPE:

- 55–8,700 gallons
- 1.65 spg rating for primary tank
- Spg ratings for secondary tanks must be equal to primary tank
- All other tank sizes must equal primary tank spg rating

Standard Vertical Flat Bottom XLPE:

- 30–15,500 gallons
- 1.65 spg rating

Plumbing to the tank:

- Required use of flexible connections with fittings on lower third of sidewall
- » Allows for lateral and vertical expansion and contraction of the tank
- » Reduces pump and piping vibration stress on the tank
- Expansion joints must meet the following minimum requirements:
  - » Axial Compression ≥ 0.67″
  - » Axial Extension ≥ 0.67″
  - » Lateral Deflection ≥ 0.51″
  - » Angular Deflection ≥ 14°
  - » Torsional Rotation ≥ 4°

Alternative secondary containment: PPC secondary containment basin or other secondary containment suitable for sodium hydroxide, of adequate size for use.

Plumbing: Requires use of flexible connections with fittings on lower one-third of sidewall. See page 80 for flexible connections options.

Venting: Go to www.polyprocessing.com/venting for venting information.

Foundation: PPC IMFO® tank pad or smooth concrete foundation designed to accommodate IMFO®, SAFE-Tank® or vertical tank.

Temperature: Product should not exceed 100°F at delivery or during storage or drop below 50°F to prevent damage to the chemical. Contact Customer Support if chemical is to exceed 100°F.

Lid: SAFE-Surge® manway cover for pneumatically loaded tanks; bolted manway cover for all other applications.

Options: Restraint systems for wind and seismic, level gauges, ladders, heating pads, insulation, mixer mounts and engineering stamp.

»» See our website for a complete Chemical Resistance Chart.

NOTE: To meet NSF-61 certification, use EPDM or Viton® GF.

NOTE: Heating pad and insulation are highly recommended to prevent crystallization of the chemical.

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The above components are just a few of the many options offered by Poly Processing. For additional information visit **www.polyprocessing.com/sodiumhydroxide** or talk to your Poly Processing representative.