Poly Processing Tank Design Checklist
A Guide to Building the Right Tank for Your Application

Use this checklist as a guide to configuring a tank package for your application. If you have questions along the way, please contact a Poly Processing Tank Specialist at 866-765-9957.

Chemical: ________________

When building a tank system, we recommend that you always start with the chemical being stored.

Tank Materials and Technologies

**High-density Cross-linked Polyethylene (XLPE):** High-density cross-linked polyethylene is set with a thermoset plastic after they are manufactured and are much more durable and long-lasting than standard linear polyethylene tanks.

**High-density Linear Polyethylene (HDPE):** Standard linear high-density polyethylene is capable of storing water and some non-corrosive chemicals.

**OR-1000:** An anti-oxidant interior tank coating. Required for Sodium Hypochlorite and Sulfuric Acid (greater than or equal to 80%) so that tanks meet NSF certification.

Tank Designs

Based on your application and specific needs, we have several tank designs to choose from.

**SAFE-Tank:** A tank-within-a-tank storage system. Provides 110% containment. Optimal when secondary containment is not available. Size ranges from 55 to 8,700 gallons.

**Vertical IMFO:** A full drain solution in a vertical tank design. Available in flat-bottom or slope-bottom design. Anti-oxidant OR-1000 coating available. Ranges in size from 200 to 13,650 gallons.

**Vertical:** A standard cylindrical tank, use if secondary containment is in place, flat-bottom, versatile tank. NSF approved for potable water storage. Sizes range from 30 to 13,650 gallons.

**Cone-Bottom:** Offers a 100% tank drain. Addresses vortexing issues. Metal stand and mixer brackets recommended, ranges in size from 195 to 10,950 gallons.

**Open-Top:** Typically used for blending or containment. Use with non-hazardous chemicals, ranging in size from 50 to 14,650 gallons.

**Basin:** A secondary containment vessel for vertical tanks. Compatible with IMFO fittings. Offered in cylindrical and rectangular options, with sizes ranging from 80 to 1,850 gallons.

Contact us at 866-765-9957 (866-PolyXLPE)
E-mail: sales@polyprocessing.com
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Fittings and Accessories

**Manways and Lids:** It's important to know if your tank is pneumatically-filled or not. For a pneumatically-filled bulk storage tank, we require a SAFE-Surge Manway Cover or a F.S. 2650 Manway Cover; otherwise, we require a Bolted Manway Cover, unless you need to visually inspect the inside of the tank often. A Fume-tight Manway Cover should be used when you are storing products with harmful fumes.

**Venting:** Proper venting is an important factor in safe chemical storage. Eliminating harmful fumes from off-gassing chemicals. Chemicals that produce hazardous or problematic fumes require a scrubber to eliminate any environmental problem. The size of your vent depends on the size of your tank and the tank discharge and fill size.

**Ladders:** Using ladders not specifically designed for chemical storage tanks can be dangerous. We offer integrated OSHA-approved, fixed ladder systems for safe, easy access to the top of your tank.

**Plumbing:** When choosing your plumbing, there are some key things to consider. The material you consider for your plumbing depends on the chemical you are storing, as some materials are not compatible with certain chemicals. Also consider expansion joints if you need to compensate for misalignment or isolate vibrations. If you're already using an IMFO fitting, there are Butterfly Valves specifically designed to be shutoff valves for IMFO fittings.

Other Considerations

**Color:** UV exposure and potential damage, weather-resistance, and tank identification are a few reasons to consider a colored tank. While most of our indoor tanks come in standard white, we offer Carbon Black, natural, or gray resins for outdoor tanks or day tanks.

**Restraints:** It's important to consider restraints to avoid catastrophic damage in the event of a natural disaster. Depending on your geographic location, wind and/or seismic restraints will be suggested after thorough examination from an engineer.

**Agitator or Mixer Brackets:** Often used to assist with the blending of polymers and various chemicals held in cone-bottom and open top tanks.

**Fittings:** Your specific chemical and application will help determine the right fitting for your tank, as some fitting materials are not compatible with more volatile chemicals. In order to find the fittings that best suit your storage needs, contact a chemical storage expert today.