INTRODUCTION

This Guide Specification is intended for use by people knowledgeable in the discipline or construction craft covered herein. It is a tool to help such users do a better job in less time. Careful editing and continual updating of the Guide are important in providing a successful specification. Please use the attached Guide Specifications Comment form (at the end of the document) to communicate to the Guide Author any potential updates.

Note to Specifier

This guide is designed to enhance the quality and productivity of projects, but should not be used without professional review. The specifications as provided are starting points for customization into Contract Documents. Responsibility of the specifications transfers to the design team upon downloading and to the individuals who apply their seals to the document.

This Specification is intended to cover vertical single or double wall (contained), flat-bottomed, high-density crosslinked polyethylene tanks located inside or outside of structures.

If you have any questions about the information provided within, contact your local Poly Processing distributor. To locate your local distributor please call 866.590.6845.

Caution: Polyethylene tanks are not intended to be used for pressures above or below atmospheric. They are also not to be used for liquids heated above their flash points or at temperatures above 150 degrees Fahrenheit. For system designs requiring continuous operation above 100 degrees F, contact Poly Processing Company.

Polyethylene tanks require correct venting and flexible connections at fittings for longest life.

Caution: Many storage applications require secondary containment. Project designers and tank users must ensure needed secondary containment is appropriate and adequate for the stored material.
### PART 1-GENERAL

#### 1.01 Requirements

<table>
<thead>
<tr>
<th>Note to Specifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specify if tank is for indoor or outdoor use and specify type of chemical, e.g., caustic soda.</td>
</tr>
</tbody>
</table>

1. The CONTRACTOR shall provide polyethylene tanks and accessories, complete and in place, in accordance with the Contract Documents.

2. Unit Responsibility: The CONTRACTOR shall be responsible for furnishing the tank(s) and accessories in accordance with the following specifications.

#### 1.02 REFERENCES, CODES AND STANDARDS

A. American Society of Testing Materials (ASTM).
   1. D638 Tensile Properties of Plastics
   2. D790 Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
   3. D883 Standard Definitions of Terms Relating to Plastics
   4. D1505 Density of Plastics by the Density-Gradient Technique
   5. D1525 Test Method for Vicat Softening Temperature of Plastics
   6. D1693 ESCR Specification Thickness 0.125" F50-10% Igepal
   7. D1998 Standard Specification for Polyethylene Upright Storage Tanks Section 11.3: Low temp. Impact Test and Section 11.4: Gel Test

B. ANSI Standards: B-16.5, Pipe Flanges and Flanged Fittings


E. [NEMA ICS 6: Enclosures for Industrial Control and Systems]

F. ARM: Low Temperature Impact Resistance (Falling Dart Test Procedure).
1.03 SUBMITTALS

A. Shop Drawings: Shop drawings shall be approved by the engineer or contractor prior to the manufacturing of the tank(s). Submit the following as a single complete initial submittal. Sufficient data shall be included to show that the product conforms to Specification requirements. Provide the following additional information:

1. Tank and Fitting Material
   a. Resin Manufacturer Data Sheet
   b. Fitting Material
   c. Gasket style and material
   d. Bolt material

2. Dimensioned Tank Drawings
   a. Location and orientation of openings, fittings, accessories, restraints and supports.
   b. Details of inlet and outlet fittings, manways, flexible connections, and vents

3. Calculations shall be stamped and signed by a registered, third party engineer where required.
   a. Wall thickness. Hoop stress shall be calculated using 600 psi @ 100 degrees F as prescribed in ASTM D 1998.
   b. Tank restraint system. Show seismic and wind criteria.

4. Electrical heat tracing installation details.

5. Insulation data

B. Manufacturer's warranty

C. Manufacturer's unloading procedure (see Poly Processing Company Installation Manual)

D. Manufacturer's installation instructions (see Poly Processing Company Installation Manual)

E. Supporting information of UL tank manufacturing capabilities.

F. Supporting information of ISO 9001 certification.

G. Manufacturer's Qualifications: Submit to engineer a list of 5 installations in the same service as proof of manufacturer's qualifications.

F. Factory Test Report

   1. Material, specific gravity rating at 600 psi @ 100 degrees F. design hoop stress.
2. Wall thickness verification
3. Fitting placement verification
4. Visual inspection
5. Impact test in accordance with ASTM D 1998
6. Gel test in accordance with ASTM D 1998
7. Hydrostatic test in accordance with ASTM D 1998

1.04 QUALITY ASSURANCE
A. The tanks of the same material furnished under this Section shall be supplied by Poly Processing Company or equal who has been regularly engaged in the design and manufacture of chemical storage tanks for over 10 years. The manufacturer must demonstrate to the satisfaction of the engineer that the quality is equal to tanks made by Poly Processing Company.
B. Tanks shall be manufactured by an ISO 9001 certified manufacturing facility.
C. Comply with the following Reference Standard: Standard Specification for Polyethylene Upright Storage Tanks, ASTM D 1998 except as modified herein.
D. The manufacturer shall have a UL structural compatibility listing for vertical above ground tanks.
E. Tanks shall be manufactured from virgin materials.

1.05 WARRANTY
A. Upon request, Poly Processing Company will provide a statement of warranty in the owners name for each individual tank, by serial number, and by chemical service application. For most chemical applications, Poly Processing Company offers a limited 5 year full replacement warranty. For Sulfuric Acid, Hydrochloric Acid, and Sodium Hypochlorite the warranty varies. Contact your Poly Processing Company distributor for chemical specific positions and warranty statements.

PART 2 – PRODUCTS

2.01 GENERAL
A. Tanks shall be rotationally-molded high density crosslinked polyethylene, one-piece seamless construction, cylindrical in cross-section and vertical in axis. Tanks shall be adequately vented as prescribed in Poly Processing Company's Technical Bulletin, Venting Vertical Storage Tank, dated 1/18/99, and where indicated, tanks shall be provided with entrance manways, [level indicators,] [electrical heat tracing, spray-on urethane foam insulation, and exterior coating]. Tanks shall be marked to identify the manufacturer, date of manufacture and serial number.
2.02 MANUFACTURER
A. Tanks shall be manufactured by Poly Processing Company

2.03 POLYETHYLENE STORAGE TANKS
A. Tanks shall comply with ASTM D 1998 Polyethylene Upright Storage Tanks, except where modified in this specification.

B. Service: Chemical storage tanks shall be suited for the following operating conditions:

<table>
<thead>
<tr>
<th>Tank Reference Number</th>
<th>[ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical stored</td>
<td>[ ]</td>
</tr>
<tr>
<td>Chemical concentration, percent</td>
<td>[ ]</td>
</tr>
<tr>
<td>Chemical specific gravity</td>
<td>[ ]</td>
</tr>
<tr>
<td>Maximum fluid temperature, deg. F</td>
<td>[ ]</td>
</tr>
<tr>
<td>Minimum fluid temperature, deg. F</td>
<td>[ ]</td>
</tr>
<tr>
<td>Minimum ambient air temperature, deg. F</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

**Note to Specifier**
Because of manufacturing process changes and progress in the development of materials, recommendations for type of tank material may change in time. The specifier should contact Poly Processing Company to validate material selections.

Tank material is classified as follows:
**ASTM D 1998 Type I** - Crosslinked Polyethylene (XLPE) is rated at 150°F maximum service temperature, and is a thermoset plastic that is not recyclable or repairable by thermal welding. XLPE has better structural strength and resistance to crack propagation than High Density Linear Polyethylene (HDPE). For system designs requiring continuous operations above 100 degrees F, contact Poly Processing Company.

The Specifier should consult the tank manufacturer to determine the suitability of XLPE for the specific chemical service.
Select chemical, concentration, and approximate specific gravity from the following table. The recommended tank systems are:

<table>
<thead>
<tr>
<th>Chemical Stored</th>
<th>Concentration</th>
<th>Resin</th>
<th>Fitting Material</th>
<th>Gasket Material</th>
<th>Bolt Material</th>
<th>Recommended Specific Gravity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alum</td>
<td>all</td>
<td>XLPE</td>
<td>PVC/316 SS</td>
<td>Viton/EPDM</td>
<td>316 SS</td>
<td>1.9</td>
</tr>
<tr>
<td>Ammonium Hydroxide</td>
<td>Saturated</td>
<td>XLPE</td>
<td>PVC/316 SS</td>
<td>Viton/EPDM</td>
<td>316 SS</td>
<td>1.65</td>
</tr>
<tr>
<td>Ferric Chloride</td>
<td>96 %</td>
<td>XLPE</td>
<td>PVC</td>
<td>Viton/EPDM</td>
<td>Titanium</td>
<td>1.65</td>
</tr>
<tr>
<td>Hydrofluosilic Acid</td>
<td>All</td>
<td>XLPE</td>
<td>PVC/PP</td>
<td>Viton</td>
<td>Monel</td>
<td>1.9</td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>30 %</td>
<td>XLPE</td>
<td>PVC/316 SS</td>
<td>Viton</td>
<td>316 SS</td>
<td>1.9</td>
</tr>
<tr>
<td>Potassium Permanganate</td>
<td>All</td>
<td>XLPE</td>
<td>PVC</td>
<td>Viton/EPDM</td>
<td>C-276</td>
<td>1.9</td>
</tr>
<tr>
<td>Sodium Chlorite</td>
<td>25%</td>
<td>XLPE</td>
<td>PVC/316 SS</td>
<td>Teflon</td>
<td>316 SS</td>
<td>1.90</td>
</tr>
<tr>
<td>Sodium Hydroxide</td>
<td>10 %</td>
<td>XLPE</td>
<td>PVC/316 SS</td>
<td>EPDM</td>
<td>316 SS</td>
<td>1.65</td>
</tr>
<tr>
<td>Sodium Hydroxide</td>
<td>50%</td>
<td>XLPE</td>
<td>PVC/316 SS</td>
<td>EPDM</td>
<td>316 SS</td>
<td>1.65</td>
</tr>
<tr>
<td>Sodium Hypochlorite</td>
<td>9-15%</td>
<td>XLPE</td>
<td>PVC With Oxidation Resistant System</td>
<td>Viton/EPDM</td>
<td>Titanium</td>
<td>1.9</td>
</tr>
<tr>
<td>Sulfuric Acid</td>
<td>&gt; 80 %</td>
<td>XLPE</td>
<td>PVC With Oxidation Resistant System</td>
<td>Viton</td>
<td>Alloy C-276</td>
<td>2.2</td>
</tr>
</tbody>
</table>

D. Resin used in the tank manufacture shall be by Exxon Mobil Chemicals or equal and shall contain ultraviolet stabilizer as recommended by manufacturer. Where black tanks are indicated, the resin shall have a carbon black compounded into it. The tank material shall be rotationally molded and meet or exceed the following properties:
<table>
<thead>
<tr>
<th>Property</th>
<th>Type I XLPE</th>
<th>ASTM Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density, gm/cc</td>
<td>0.938-0.944</td>
<td>D1505</td>
</tr>
<tr>
<td>Environmental Stress Cracking Resistance, F50, hours, 10% Igepal</td>
<td>&gt;1,000</td>
<td>D1693</td>
</tr>
<tr>
<td>Tensile Strength, Ultimate psi, 2-inch/minimum</td>
<td>2,600</td>
<td>D638      Type IV Specimen</td>
</tr>
<tr>
<td>Elongation at Break, %, 2-inch minimum</td>
<td>400</td>
<td>D638      Type IV Specimen</td>
</tr>
<tr>
<td>Vicat Softening Point</td>
<td>~248 °F</td>
<td>D1525</td>
</tr>
<tr>
<td>Impact Brittleness temperature</td>
<td>&lt; -180 °F</td>
<td>D746</td>
</tr>
<tr>
<td>Flexural Modulus, psi</td>
<td>100,000</td>
<td>D790</td>
</tr>
</tbody>
</table>

**Note to Specifier**

Tanks for sulfuric acid > 80 % service are designed for a S.G. of not less than 2.2.

E. **Wall thickness** for a given hoop stress is to be calculated in accordance with ASTM D 1998. Tanks shall be designed using a hoop stress no greater than 600 psi. Wall thickness calculations shall assume that all tank contents have a specific gravity of not less than [1.35] [1.65] [1.9] [2.2]. In NO case shall the tank thickness be less than design thickness.

1. The wall thickness of any cylindrical portion at any fluid level shall be determined by the following equation:

\[ T = \frac{P \times OD}{2SD} \text{ or } 0.433 \times SG \times OD \times H \times OD/2SD \]

Where:

- \( T \) = wall thickness, in
- \( P \) = pressure, psi
- \( SG \) = specific gravity, gm/cc
- \( H \) = fluid head, ft
- \( OD \) = outside diameter, ft
- \( SD \) = hydrostatic design stress, 600 psi

   a. The minimum wall thickness shall be sufficient to support its own weight in an upright position without external support but shall not be less than 0.187” thick.

2. On closed top tanks, the top head shall be integrally molded with the cylindrical wall. Its minimum thickness shall be equal to the thickness of the top of the straight sidewall. In most cases, flat areas shall be provided for attachment of large fittings on the dome of the tank.

3. The bottom head shall be integrally molded with the cylindrical wall. Knuckle radius shall be:
<table>
<thead>
<tr>
<th>Tank Diameter, ft</th>
<th>Min Knuckle Radius, in</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than or equal to 6</td>
<td>1</td>
</tr>
<tr>
<td>greater than 6</td>
<td>1-1/2</td>
</tr>
</tbody>
</table>

4. Tanks with 3000 gal capacity or larger shall have at least 3 lifting lugs. Lugs shall be designed for lifting the tank when empty.

   a. Unless otherwise indicated, manways shall be 17-in diameter or greater.

   b. Unless otherwise indicated, bolted sealed top manway shall be 17- inches or greater and be in locations easily accessible from the nearest worker access position. The sealed manway shall be constructed of polyethylene material. The bolts shall be chemically compatible with the chemical being stored. Gaskets shall be closed cell, crosslinked polyethylene foam, Viton, or EPDM materials. NOTE: If pneumatically filling, provide adequate venting by either increasing the unrestricted vent size by 2 inches or provide a weighted hinged manway to prevent over pressurizing the tank.

F. Tank colors shall be natural (unpigmented), black (pigmented), or opaque colors as specified by the ENGINEER with written agreement by the tank manufacturer.

Note to Specifier
For maximum UV resistance for light sensitive chemicals such as Sodium Hypochlorite, specify black or opaque white. Pigments added to the resin for colors other than black (e.g., green, blue) may affect the structural strength of the tank. Consult with tank manufacturer.

G. SAFE-Tanks® / Containment Systems

   1. Tanks shall consist of a XLPE primary tank with a secondary containment. The primary tanks shall be vertical, cylindrical, flat bottom, dome top, and seamless in construction. The secondary containment, outer tank, shall be XLPE, open top, vertical, cylindrical, flat bottom, and seamless in construction.

   2. The tank diameter shall be measured externally. Tolerance on the outside diameter including out of roundness shall be plus or minus 2 percent. Measurement shall be taken in a horizontal position. The knuckle radius at bottom to wall shall be as stated in section E 3.

   3. All cut edges, such at entrance manway, shall be trimmed to have smooth edges.

   4. Fittings for SAFE-Tanks® / Containment Systems

2.04 TANK ACCESSORIES

   A. Ladder:

   1. [Painted carbon steel], {fiberglass}, [galvanized carbon steel] or [stainless steel] access ladders shall be provided with the polyethylene chemical storage tanks at locations as shown. Use proper chemical resistant materials when anchoring to tank dome or sidewall. Safety cages shall be added to ladders as required. Ladders must be designed to OSHA standard 2206; 1910.27.
2. Ladders must be secured to the tank and secured to the concrete to allow for tank expansion and contraction due to temperature and loading changes. See Poly Processing Company’s Tank Installation Manual.

3. All ladders shall be designed to meet applicable OSHA standards. Reference: OSHA 2206; 1910.27; fixed ladders.

B. Restraint System:

1. Metal components to be galvanized, stainless steel, or painted clips, edge softeners, and tension ring with stainless steel or galvanized cables and clamps.

2. Seismic system to be designed to meet the proper seismic zone and specified wind load. PE stamped calculations and or drawings may be required based on individual project requirements.

3. Concrete pad must be large enough in diameter to accommodate restraint clips. Contact your local Poly Processing Company distributor with tank dimensions and restraint/seismic requirements.

C. Fittings shall be of the following type as suitable for the service:

1. Fittings shall be compression type, tank adapters with standard National Pipe Thread to be compatible with associated plumbing. Fittings shall be made vertical on sloping tank tops as required.

2. Bolted Spool Fittings shall be flange fittings with one 150-lb flange. Use bolts compatible with the chemical stored and having polyethylene encapsulated heads. Provide gaskets for bolts sealing surface on inner surface of tank.

4. Integrally molded outlets (molded as part of the tank) shall be used as a drain/outlet. Molded-in inserts shall not be allowed. Coordinate any concrete tank pad block out requirements with tank manufacturer or representative.

5. Poly Processing Company transition fittings shall be used for SAFE-Tanks® installations where sidewall penetrations are necessary.

5. Gaskets shall be a minimum of 1/4-inch thickness and constructed of EPDM, Viton or a material of construction compatible with the product being stored.

6. Fitting, gasket and bolt materials shall be as follows:

<table>
<thead>
<tr>
<th>Note to Specifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select chemical, fitting material, gasket material and bolt material from the table found on page 6 of this specification. Confirm material selection with tank supplier.</td>
</tr>
</tbody>
</table>

7. All lower-sidewall tank fitting attachments shall be equipped with flexible connections designed to deflect based upon tank loading, chemical temperature, and storage time duration. Tank piping flexible couplers shall be designed to allow design movement in any direction.
8. Equipment Platforms: Platforms shall be mounted using properly designed mounting hardware. Platforms shall be painted carbon steel or fiberglass.

2.05 TANKS:

<table>
<thead>
<tr>
<th>Note to Specifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fill in table with Equipment Number, Configuration, material type, insulation, nominal diameter, nominal height, nominal capacity, liquid depth, manway, exposure and color. See Notes for more information. Specifier to confirm tank data with manufacturer for specific chemical tank application.</td>
</tr>
</tbody>
</table>

A. Tank Schedule

<table>
<thead>
<tr>
<th>Configuration</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Material Type</td>
<td>[XLPE]</td>
</tr>
<tr>
<td>Insulation</td>
<td>[yes] [no]</td>
</tr>
<tr>
<td>Nominal diameter, ft</td>
<td></td>
</tr>
<tr>
<td>Equipment No.</td>
<td></td>
</tr>
<tr>
<td>Overall height, ft (see Note 1)</td>
<td></td>
</tr>
<tr>
<td>Straight sidewall capacity, gallons (to top-sidewall of tank)</td>
<td></td>
</tr>
<tr>
<td>Liquid depth, maximum, ft</td>
<td></td>
</tr>
<tr>
<td>Manway (see Note 2) Mounting Diameter, inches</td>
<td></td>
</tr>
<tr>
<td>Exposure</td>
<td>[indoors] [outdoors]</td>
</tr>
<tr>
<td>Color</td>
<td></td>
</tr>
</tbody>
</table>

Note 1: Approximate overall height is measured along the straight cylindrical portion of the tank and includes the dome top.
B. Fittings

1. Tank fittings shall be according to the fitting schedule below. Gasket material shall be [Viton], [EPDM], or a material that is compatible with the product being stored and shall be a minimum of ¼-in thick. Fitting types: PVC schedule 80, PP schedule 80, CPVC schedule 80, 316 SS, C-276 or as specified and agreed to by the tank manufacturer. Threaded fittings shall use National Pipe Thread (NPT). If tanks are insulated, fittings shall be installed at the factory prior to application of the insulation.

<table>
<thead>
<tr>
<th>Item</th>
<th>Fitting Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment No.</td>
<td>[ ]</td>
</tr>
<tr>
<td>Fill</td>
<td>[ ]</td>
</tr>
<tr>
<td>Overflow</td>
<td>[ ]</td>
</tr>
<tr>
<td>Tank drain</td>
<td>[ ]</td>
</tr>
<tr>
<td>U-vent</td>
<td>[ ]</td>
</tr>
<tr>
<td>Outlet to pump</td>
<td>[ ]</td>
</tr>
<tr>
<td>Level indication</td>
<td>[ ]</td>
</tr>
<tr>
<td>Other</td>
<td>[ ]</td>
</tr>
<tr>
<td>Other</td>
<td>[ ]</td>
</tr>
<tr>
<td>Other</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

2. Bolted flange fittings shall be constructed with one 150-lb flange, one 150-lb flange gasket, and the correct number of bolts. Flanges and gaskets shall be supplied per section 2.05.B.1. Bolts shall have the bolt head encapsulated with polyethylene preventing fluid contact with the metal material. Encapsulated heads shall have a gasket to provide a sealing surface against the inner wall of the tank. Bolt holes shall straddle the principal centerline of the tank.

Integrally Molded Flanged Outlet (IMFO®). These outlets must be an integral part of the tank, molded from the same material as the tank and provide complete drainage of liquid through the sidewall of a flat bottom tank. Metal and alloy inserts shall not be used. The tank should be properly supported- either with a high density crosslinked polyethylene cushion or a concrete pad designed for the IMFO®.

3. Integrally Molded Flanged Outlet Fittings (IMFO®). These fittings shall be an integral part of the tank and provide complete drainage of liquid through the sidewall of a flat bottom tank. The piping tie-in to the IMFO flange shall be accomplished utilizing and ANSI B-16.5, 150# flange.
4. Down Pipes and Fill Pipes: Down pipes and fill pipes shall be supported at 6-ft max intervals. Down pipes and fill pipes shall be PVC or material compatible with the chemical stored.

5. U-Vents: Each tank must be vented for the material and flow and withdrawal rates expected. Vents should comply with OSHA 1910.106(F)(iii)(2)(IV)(9). U-vents shall be sized by the tank manufacturer and be furnished complete with insect screen if required (Insect screen lessens the tank capacity by 1/3). U-vents shall be constructed of PVC or material compatible with the chemical stored.

6. Flange Adapters: Adapters may be used to adapt threaded or socket fitting components to 150-lb flange connections. Adapters shall be of material compatible with the chemical stored.

7. SAFE-Tanks® Transition Fittings: Connections to the primary tank sidewall shall be installed using a Poly Processing Company Bellow Style Transition Fitting to maintain containment integrity of the entire Safe Tank system (see diagram below). This design insures 100% chemical containment in the event of primary tank fitting failure. The bellow design allows for system expansion and contraction, providing less residual stress on the primary tank.

10. Tie-Ins: Flex hose or expansion joints must be utilized to tie-in hard piping to any side wall fitting.

2.06 LEVEL INDICATION

A. Float Indication: The level indicator shall be assembled to the tank and shall consist of PVC float, indicator, polypropylene rope, perforated interior pipe, PVC roller guides, clear PVC sight tube and necessary pipe supports. The level indicator shall act inversely to the tank contents and shall not allow entrance of tank contents into the sight tube at any time.

B. Sight Gauge: Level indication: shall be provided where indicated. The sight gauge shall be constructed of clear rigid pipe and allow for tank contraction and expansion for varying temperatures and level of filling. The pipe shall be connected to the tank with 3/4-in fittings with valves for isolation and drainage purposes. Caution should be used when using external sight gauges because of possible breakage and tank leakage.

C. Ultrasonic Level Indicator: The ultrasonic level indicator shall be, (to be specified), and suitable for service in a non-hazardous/hazardous environment.

2.07 TANK INSULATION AND HEAT TRACING

A. To be installed by Poly Processing Company. On 14’ diameter tanks, field installation to be provided by others.
2.08  FACTORY TESTING

A. Material Testing

1. Perform gel and low temperature impact tests in accordance with ASTM D 1998 on condition samples cut from each polyethylene chemical storage tank.

2. Degree of Crosslinking. Use Method C of ASTM D 1998- Section11.4 to determine the ortho-xylene insoluble fraction of crosslinked polyethylene gel test. Samples shall test at no less than 65 percent.

B. Tank Testing

1. Dimensions: Take exterior dimensions with the tank empty, in the vertical position. Outside diameter tolerance, including out-of-roundness, shall be per ASTM D 1998. Fitting placement tolerance shall be +/- 1/2-in vertical and +/- 1 degree radial.


3. Wall thickness
   a. Tanks 2500 gallon or larger shall be measured for wall thickness by ultrasonic methods with a minimum of nine measurement points on the lower sidewall of the tank.

4. Hydrostatic test: Following fabrication, the tanks, including inlet and outlet fittings, shall be hydraulically tested with water by filling to the top sidewall for a minimum of 1/2 an hour and inspecting for leaks. Following successful testing, the tank shall be emptied and cleaned prior to shipment.

PART 3 - EXECUTION

3.01  DELIVERY, STORAGE, AND HANDLING

A. Tank shall be shipped upright or lying down on their sides with blocks and slings to keep them from moving. AVOID sharp objects on trailers.

B. All fittings shall be installed and, if necessary, removed for shipping and shipped separately.

C. Upon arrival at the destination, inspect for damage in transit. If damage has occurred, Poly Processing Company shall be notified immediately.

3.02  INSTALLATION

A. Install tanks in strict accordance with Poly Processing Company’s Tank Installation Manual and shop drawings.

3.03  FIELD TESTING

A. Poly Processing Company recommends that all tanks be hydro-tested for 24 hours prior to commissioning.

   End Of Section