Hydrogen Peroxide.
Accommodating a potentially explosive chemical.

Available in a variety of concentrations, hydrogen peroxide is used as an oxidizing agent in textile, paper and fur processing. It is also used as a plasticizer, a polymerization catalyst and a water and sewage treatment chemical. It poses a number of challenges when it comes to storage:

• Concentrated solutions are highly toxic and are strong irritants.

• Hydrogen peroxide is relatively unstable and decomposes into water and oxygen when exposed to the environment. The primary danger of this composition is fire and/or explosion.

For concentrations of hydrogen peroxide that are below 50%, high-density crosslinked polyethylene is a smart option.
If there is a chance that hydrogen peroxide has escaped from its storage system, evacuation is mandatory, since explosion could occur. Therefore, it’s imperative that an environment be made as leak-free as possible. Poly Processing’s crosslinked polyethylene helps ensure that, by providing a high-strength storage option for hydrogen peroxide. The SAFE-Tank® system offers tank-within-a-tank protection for secondary containment. And if secondary containment is already provided for the tank, Poly Processing recommends the IMFO® tank system to provide complete drainage without entering the vessel shell, helping personnel avoid contact with this strong irritant.

The Poly Processing HYDROGEN PEROXIDE SYSTEM.

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>RESIN TYPE</th>
<th>SPECIFIC GRAVITY RATING</th>
<th>FITTING MATERIAL</th>
<th>GASKET MATERIAL</th>
<th>BOLT MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen Peroxide</td>
<td>XLPE</td>
<td>1.9</td>
<td>PVC/CPVC</td>
<td>Viton®</td>
<td>316SS</td>
</tr>
</tbody>
</table>

**NOTE:** Use only flanged connections with hydrogen peroxide. Threaded fittings should be avoided!

**Alternative secondary containment:** PPC secondary containment basin or other secondary containment suitable for hydrogen peroxide, of adequate size for use

**Plumbing:** Requires use of flexible connections with fittings on lower third of sidewall. See page 54 for flexible connections options.

**Venting:** See chart on page 63.

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

**Temperature:** Product should not exceed 100°F at delivery or during storage to maintain ASTM D1998 design parameters.

**Lid:** A hinged, weighted manway to prevent over-pressurization due to rapid decomposition

**Options:** Restraint systems for wind and seismic, level gauges, ladders, heating pads, insulation, mixer mounts, OR-1000™ and engineering stamp

The above components are just a few of the many options offered by Poly Processing. See pages 36–63 for additional information and products, or talk to your Poly Processing representative.