

Polyethylene Tank Life Expectancy

For 35 years, Poly Processing Company has been **Helping Our Customers . . .**

Solve Problems associated with storing hazardous chemicals, **Managing Risk** with the Environment and Employee Safety and **Growing Their Profits** with Increased Tank Longevity and Operating Efficiencies. We have specialized in providing hazardous chemical storage solutions to the industrial, water and waste water markets. While we manufacture both linear and crosslink polyethylene storage tanks; in **hazardous chemical environments, crosslink polyethylene** is the material of choice. Our customers report crosslink polyethylene tanks providing service for 10+ years with 15 to 20 years of tank service being common. However; there are many factors and variables that have an effect on the useful life of any tank including polyethylene.

Chemical, Concentration and Temperature: The chemical, concentration and operating temperature are all factors influencing the life expectancy of a polyethylene tank. For example, high concentrations of Sulfuric Acid are stress cracking agents and are more aggressive oxidizers than less concentrated chemicals such as 25% Caustic Soda. For this reason, Poly Processing offers our customers the OR-1000™ Anti-Oxidant Systems. Another example: 12% Sodium Hypochlorite will degrade from UV exposure and elevated temperatures. As it degrades, sediment builds in the bottom of the tank leading to a shorter tank life. To eliminate this sludge buildup, Poly Processing Company offers our customers the IMFO® (Integrally Molded Flanged Outlet). The IMFO® design promotes continuous “system” flushing increasing tank life and operating efficiencies. Poly Processing Company chemical storage tanks are constructed from premium materials and designed specifically for the chemical, concentration and temperature requirements.

Installation and Piping: The single biggest reason for tank life reduction is improper tank installation and “**hard**” piping. Polyethylene’s broad spectrum of chemical resistance vs. other materials of construction is based on its ability to expand and contract. Flexible connections compensate for tank expansion and contraction promoting a longer useful life. It is important to follow Poly Processing Company’s Installation Manual Instructions during the installation process.

Venting: Often overlooked, venting is a very important step that promotes tank longevity. Polyethylene tanks are rated at atmospheric pressure/vacuum. Adequate vent size is always based on flow and delivery rates so it is important to gather the following information to adequately determine the proper venting requirements:

- 1) Is the tank to be filled pneumatically?
- 2) Is the tank to be vented to atmosphere?
- 3) Does the length of the vent exceed 3 feet (piped to a central vent system)
- 4) Is a fume scrubbing system to be used?
- 5) Are vent screens to be used (restricts flow)?
- 6) Does the tank manufacturer offer a method of “emergency venting” to prevent over-pressurization?

Other Items Effecting Tank Longevity:

- 1) Continuous cycling (fill / discharge)
- 2) Excessive agitation
- 3) Mobile applications

For further information about your specific needs or applications, please contact Poly Processing Company at 1-866-590-6845 or visit our website at www.polyprocessing.com.