



## Background

A reverse osmosis (RO) water treatment plant in southern Florida had suffered two system failures in less than one year. The failures at the plant were due to the use of 98% sulfuric acid. Their third system installation, using Asahi/America's Ultra Proline® Halar® pipes, fittings and valves proved to solve the systems' problems.

## Problem

After the initial PVDF piping system failed, the plant installed CPVC schedule 80 piping, valves and fittings. The new CPVC system lasted approximately ten months before it developed hair line stress cracks throughout the entire length of the pipe and acid began weeping through the pipe wall.

## Solution

Installing Asahi/America's Ultra Proline® Halar® piping solved these problems because Halar® could handle the 98%+ concentration of sulfuric acid. Since the installation, the plant has experienced many years of trouble-free service.



## Ideal Applications

- High concentration
- Sulfuric acid
- pH 1-14
- Bleach
- Strong oxidizing agents (chlorine, ozone, hydrogen peroxide)

## Asahi Advantage

- Custom fabrication options
- On-site weld training opportunities
- Advanced IR welding technology available
- Start-to-finish project assistance

Asahi/America is a supplier of a wide range of valves, actuators, pipe, fittings, and welding equipment for high purity, commercial, industrial and environmental applications. Discover more at [www.asahi-america.com](http://www.asahi-america.com)

## Ultra Proline<sup>®</sup> - Halar<sup>®</sup> (ECTFE) Piping System

### Features/Benefits

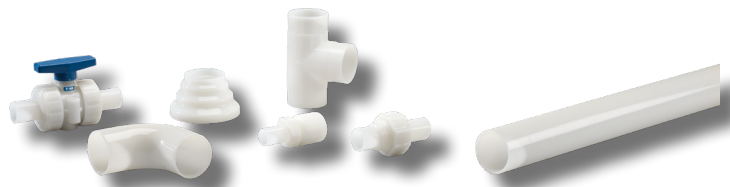
- Ideally suited for the harshest chemical applications
- Perfect substitute for rigid PFA pipe
- ECTFE material is optimum material for transporting sodium hypochlorite, chlorine gas, ozone and chlorine dioxide
- Offers excellent chemical and temperature resistance
- Highly versatile and suitable for the broadest range of applications
- Ideal for solvents and/or high pH applications at elevated temperatures

### Pipe and Fittings

- 20mm-110mm (1/2" - 4") SDR 21, 150psi

### Valves

- Type-21 ball valves: 20mm - 32mm (1/2" - 1")
- T342 diaphragm valves: 20mm - 63mm (1/2" - 2")
- Frank series regulating valves: 20mm - 63mm (1/2" - 2")



### Applications

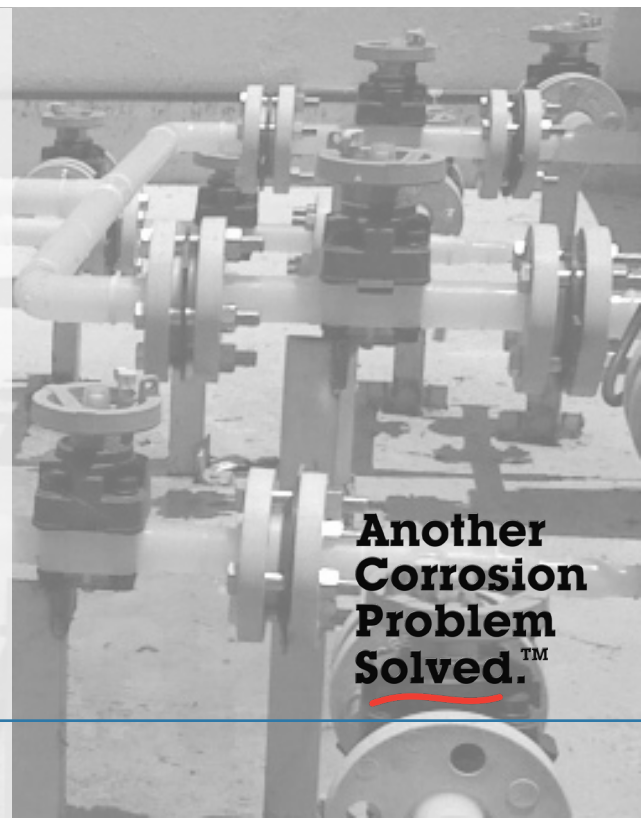
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### Welding Methods



## Ultra Proline<sup>®</sup> - Halar<sup>®</sup> Piping Systems

Halar<sup>®</sup> (ECTFE) is a thermoplastic melt processable copolymer resin in the fluoropolymer family consisting of ethylene (E) and chlorotrifluoroethylene (CTFE). Because of its excellent chemical and temperature resistance, Halar<sup>®</sup> piping systems are highly versatile and suitable for the broadest range of applications. Halar<sup>®</sup> can handle a pH from 1 to 14. Halar<sup>®</sup> does particularly well where other alternatives like expensive metal materials (titanium, alloy 20, 316/304L stainless steel) or lined steel are used with limited results. Halar<sup>®</sup> is used for high concentrations of acids (sulfuric acid) and highly oxidative applications like sodium hypochlorite, chlorine gas, ozone, and chlorine dioxide. It is also suitable for solvents and/or high pH applications at elevated temperatures.



**Another  
Corrosion  
Problem  
Solved.**<sup>™</sup>