



Chemical Piping Systems

POLYPROPYLENE AND PVDF PIPING SYSTEMS

Simtech offers both Polypropylene and PVDF high performing piping systems to serve the needs of chemical processing and other industries.

Our complete line of pipe, fittings, valves, and fusion equipment can handle a wide range of municipal and industrial applications for many different chemicals.



THE POLYPROPYLENE AND PVDF ADVANTAGE

PP Chemical Compatibility

Simtech's Polypropylene (PP) is compatible with a broader range of chemicals than virtually any other material commonly used for piping. PP is suitable for handling strong bases, dilute acids, and organic solvents.

PVDF Temperature Range & Chemical Compatibility

Simtech's Polyvinylidene Fluoride (PVDF) has excellent resistance to most inorganic chemicals, strong and dilute acids, aliphatic and aromatic hydrocarbons, organic acids, and halogens. Because PVDF has outstanding chemical resistance to highly aggressive fluids up to 280°F, it is an ideal substitute for expensive exotic alloys.

Installed Costs

Far less expensive to purchase and install than stainless steel, PP when installed in a pressure piping system has a lower installed cost than CPVC and has a similar cost to schedule 80 PVC.

Joint Integrity & Safety (Socket Fusion ½" – 4", Butt Fusion ½" – 48")

Both PP and PVDF are assembled using reliable thermal fusion. This proven process is easy, repeatable, and can be visually inspected to determine joint integrity. After a brief cooling time, the joint is complete and ready to use. There are no hazardous, toxic fumes from solvent cements and no adhesives are required.

Durable & High Quality

Both PP and PVDF pressure piping from Simtech is stress relieved (annealed) after extrusion to ensure maximum service life of the material. Simtech's PP is manufactured in accordance with ASTM D4101, and PVDF is manufactured in accordance with ASTM D3222.



MORE SIZES FOR MORE APPLICATIONS

Polypropylene (PP)

Pipe	1/2" (20mm) – 48" (1200mm)
Molded Fittings	
Butt Weld	1/2" (20mm) – 24" (600mm)
Socket Weld	1/2" (20mm) – 4" (110mm)
Fabricated Fittings	Up to 48" (1200mm)

PVDF

Pipe	1/2" (20mm) – 12" (315mm)
Molded Fittings	
Butt Weld	1/2" (20mm) – 12" (315mm)
Socket Weld	1/2" (20mm) – 4" (110mm)

PRESSURE RATINGS (@68°F)

Polypropylene (PP)

150 psi (PN10)	1/2" (20mm) – 18" (450mm)
90 psi (PN6)	2" (63mm) – 32" (800mm)
45 psi (PN3.2)	4" (110mm) – 48" (1200mm)

PVDF

232 psi (PN16)	1/2" (20mm) – 4" (110mm)
150 psi (PN10)	2-1/2" (75mm) – 12" (315mm)

OPERATING TEMPERATURE RANGES

PP +35°F to +212°F (+2°C to +100°C)

PVDF -40°F to +280°F (-40°C to +138°C)



PP & PVDF PIPING

WHERE TO USE IT

The chemical compatibility and temperature range of Simtech's PP and PVDF piping make them applicable in an enormous range of services. The systems can be buried or used above ground.

PP Can Be Ideal For:

- Process Lines
- Process Sewers
- Acid Waste Systems
- Boiler Blowdown Drains
- Groundwater Recovery Systems
- Solvent Recovery Lines
- Electrolytic Metals Refining
- Electroplating Lines
- Effluent Lines
- Some Deionized Water Services
- Acid & Caustic Transfer Lines
- Industrial Cooling Water
- Raw Water Supply
- Brine Lines
- Aquariums (Fresh & Salt Water)

PVDF PIPING SERVICES

PVDF is often chosen as a cost effective alternate to Stainless Steel, Monel, Hastelloy and Titanium.

Some Specific PVDF Services:

- Chlorinated Hydrocarbons
- Chlorine (Wet)
- Bromine
- 98% Sulfuric Acid (H₂SO₄)
- Strong Oxidizing Acids
- 18μ OHM Water
- High Purity Acid Services



WTP / WWTP

- Chemical Feed Systems
- Chlorination & Fluoridation
- Pressure Regulation



Chlor-Alkali

- Chlorine Processing
- Brine Preparation
- Caustic Sodas



Mining

- Sulfuric Acid
- Hydrochloric Acid
- Slurry Piping



Aquatics

- Natatoriums
- Corrosion-Free Valves
- Valve Automation



Food and Beverage

- Dairy
- Brewing
- Chemical Sterilization



O.E.M. Supplier

- Valves and Automation
- Controls and Instrumentation
- Custom Fabrication



Automotive

- Fume Exhaust
- Washdown Systems
- Process Waste Drainage



High Purity Water

- RODI Systems
- pH Control
- Semiconductor Cleaning



Power / Utilities

- Demineralization
- Flue Gas Desulpherization
- Nuclear Process Drainage



Biotech / Pharma

- RODI High Purity Water
- WFI Systems
- Environmental Containment



Laboratory Exhaust

- Corrosive Fume Extraction
- Wet Bench Hoods
- Chemical Box Exhaust



Pulp and Paper

- Bleach and Liquor Lines
- Spent Acid and Caustic Lines
- Wet Scrubber Systems



Chemical Processing

- Chemical Transfer & Storage
- Metering and Mixing
- Process Fume Extraction



Life Sciences

- High Purity RODI Water
- Laboratory Fume Exhaust
- University Facilities



Steel / Metal Finishing

- Piping Lines
- Electroplating
- Fume Exhaust



Expertise In
Engineered Plastics

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