

## Specialty Piping



### LOW-EXTRACTABLE™ PIPING FOR ULTRA-PURE WATER SYSTEMS

Spears® Low-Extractable™ Piping Systems provide a cost-effective alternative to other piping materials typically used for ultra-pure water applications in the semiconductor, electronics, biotechnology and other industries. Lower material costs combined with fast, reliable installation greatly reduce installation costs – resulting in significant savings without jeopardizing water quality.

In addition to significant cost savings, these piping systems offer several other advantages for ultra-pure water applications. These include: non-contaminating material with extremely Low-Extractable™ contaminants (particularly Total Oxidizable Carbon and trace metals), ultra-smooth interior walls, strong Schedule 80 dimensions, specialty one-step solvent-cement joining system that cures fast, and unique translucency for visual inspection of joint integrity.



### DOUBLE-SEE® DOUBLE CONTAINMENT

This vinyl double containment piping system is fast and easy to install, and is available with a complete selection of pipe, fittings, and valves. Additionally, an innovative “valve-in-valve” design is offered which allows full containment pressure rating. Double-See® is available in PVC and CPVC; either material may be primary or secondary (PVC x PVC, CPVC x PVC, CPVC x CPVC) with Clear PVC always being an option for the containment pipe. System size options range from 1/2” x 2” to 6” x 10”, meeting virtually any application requirement. Installation versatility allows simultaneous joining throughout a system or in combination with patented closure couplings which enable practical compliance with the ASME B31.3 requirement for visual inspection of all primary joint connections during the pressure test before closing the secondary piping joint.



### FUSEAL® PP CORROSIVE WASTE

Fuseal® PP is resistant to the corrosive action of alkalis, alcohols, acids, solvents and salt solutions. Dilute mineral acids and aqueous solutions of acid salts, which are so destructive to most metals, have no effect on the Fuseal PP system. In general, Fuseal PP is attacked only by strong oxidizing acids and weakened by certain organic solvents and chlorinated hydrocarbons. Fuseal PP will not rust, pit, scale, corrode or be affected by electrolysis.

Fuseal PP piping systems have excellent chemical resistance and physical properties which make the system ideal for handling corrosive waste mixtures of acids, bases and solvents present in laboratory, industrial or food and beverage processing DWV applications.



### OVERVIEW SYGEF® POLYVINYLIDENE FLUORIDE (PVDF) PIPING SYSTEMS

Polyvinylidene Fluoride (PVDF) is a semi-crystalline thermoplastic having outstanding mechanical, physical and chemical properties. These result from the chemical structure of PVDF. Polyvinylidene Fluoride belongs to the class of fluorinated polymers whose best-known representative is polytetrafluoroethylene (PTFE). PTFE is characterized by a superb heat resistance and the best chemical resistance of all polymers; a big disadvantage is that it is not melt processable, e.g., into fittings. PVDF, on the other hand, combines various advantages of PTFE with good workability into structural parts. The fluorine content in PVDF amounts to 59% by weight.



### POLYPROPYLENE PIPING SYSTEMS

#### General Information

Polypropylene is a thermoplastic belonging to the polyolefin group. It is a semi-crystalline material. Its density is lower than that of other well-known thermoplastics. Its mechanical characteristics, its chemical resistance, and especially its relatively high heat deflection temperature have made polypropylene one of the most important materials used in piping installations today.

PP is formed by the polymerisation of propylene (C<sub>3</sub>H<sub>6</sub>) using Ziegler-Natta catalysts.

There are three different types which are conventionally supplied for piping installations:

- Isotactic PP Homopolymeride (PP-H)
- PP block co-polymeride (PP-B)
- PP random co-polymeride (PP-R)

Because of its high internal pressure resistance, PP-H is preferred for industrial applications. On the other hand, PP-R is used predominantly in sanitary applications because of its low e-modulus (flexible piping) and its high internal pressure resistance at high temperatures. PP-B is mainly used for sewage piping systems because of its high impact strength, especially at low temperatures and its low thermal endurance.

### PROGEF Standard Polypropylene (PP-H)

Most of the grades are offered with nucleating agents (crystallization seeds), because PP crystallizes at least 10 times slower than PE. This way, we achieve lower internal stress and a finer structure. We differentiate between and nucleation.

Nucleation is realized by merely adding ppm (parts per million) of nucleating agents. PP is a non-polar material whose surface hardly swells or dissolves. Cementing is not possible without special surface treatment. On the other hand, PP welds very well. Pressure piping systems can use heating element socket welding, heating element butt welding or the no-contact infrared (IR-Plus®) fusion technology developed by GF.

Internal pressure resistance is ensured through long-term testing in accordance with EN ISO 15494 and with the value of MRS 10 MPa (minimum required strength).

The PP-H resin used by GF for PROGEF Standard PP industrial piping systems is characterized by:

#### Advantages

- good chemical resistance
- high internal pressure resistance
- high impact strength
- high thermal ageing and thermal forming resistance
- high stress fracture resistance
- outstanding weldability
- homogeneous, fine structure

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### Pipe, Valves and Fittings

Fabco Plastics stocks the widest range of plastic pipe and fittings in the industry. We carry pipe up to 24" in diameter and lead the industry when it comes to highly engineered specialty piping systems. We are Canada's largest supplier of plastic valves from the world's leading manufacturers including Chemkor, Chemtrol, Georg Fischer and Hayward.



### Sheet, Rod and FRP Grating

Our plastic sheet and rod come in a variety of materials including PVC, CPVC, HDPE, LDPE, UHMW, PP, PVDF and more. Fabco's complete line of sheet products are each up to 4" thick and rod is up to 14" in diameter. We will cut sheets to your specifications and provide custom-machined components as well. We also have extensive experience in the composites industry and our material of choice is Fiberglass Reinforced Plastics (FRP). We offer grating and other FRP products in three corrosion-resistant resins.



### Tanks

We carry a full line of plastic tanks in a variety of configurations to meet the requirements of extremely demanding applications. Our rugged, naturally coloured tanks are available in a wide range of sizes from 15-16,500 gallons. All of our tanks are rotationally moulded from HDLPE or XLPE for years of trouble-free service.



### Ventilation Duct and Fittings

Fabco Plastics Instaduct® makes the designing, assembling and installing of Industrial Fume Exhaust systems much easier. Our belled-end PVC Fittings and extruded Duct Pipe are seamless and quick connecting. Fabco's HF thermoplastic radial fans are designed specifically for exhausting aggressive, low-aerosol gases, explosive atmosphere and ultraclean air. For humid and corrosive environments, we can supply a complete PVC and CPVC ventilation systems.



### Scrubber Packing

Fabco Plastics offers scrubber packing in Tri-Packs, rings and saddles. We have more than a dozen different plastics to meet your stringent chemical and heat-resistance requirements. All our packing media maximizes the transfer of mass and heat with minimal pressure drop. Scrubber packing is available in an assortment of plastic, stainless steel and ceramic materials.



### Pumps and Filtration

Fabco Plastics stocks a wide range of pumps in various sizes and material both in AODD and Magnetic Drive. We also stock an extensive line of Y strainers and bag, basket, cartridge filters



### Flexible Tubing and Fittings

Our inclusive catalogue of hose and flexible tubing and fittings are sure to meet your challenging requirements. All tubing is available from 1/8" diameter to 2" diameter with a wide variety of pressure ratings and coil lengths.



### Liquid Monitoring

Fabco Plastics offers a full versatile line of Flowmeters and Instrumentation to suit your applications.

**Fabco Plastics supplies new and innovative products to a growing list of industrial and commercial market segments. We are committed to staying on the industry's leading edge and continue to provide products and services that create simplicity and efficiency for our customers. We offer the following:**

- **Commitment to Customer Satisfaction**
- **Quality products, service and technical expertise**
- **Fast delivery across Canada direct to your office or job site**
- **Off-the-shelf or custom-fabricated product to suit your particular requirements**
- **Over 20,000 products in stock**
- **Competitive and firm pricing**

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