

# We keep it contained

**Fuseal Squared<sup>®</sup>, Contain-It<sup>™</sup>, and Double-See<sup>™</sup>**  
containment piping systems

Leak detection systems available



# Containment options from GF Piping Systems

Whether to protect people from corrosive liquids, or to protect our environment from soil and water pollution, containment piping is a smart installation choice in many industries. GF has complete solutions in drainage, pressure, and retrofit piping systems.

			
	<b>Fuseal Squared® Double Containment Corrosive Waste Piping System</b>	<b>Contain-It™ Secondary Containment Piping System</b>	<b>Double-See™ Vinyl Double Containment Piping System</b>
	<b>Excellent chemical and corrosion resistant drainage system</b>	<b>Fits over virtually any carrier system, new installation or retrofit</b>	<b>Easy-to-install, innovative-design pressure system</b>
<b>Size range</b>	<ul style="list-style-type: none"> <li>• 1½”–8” inner pipe</li> <li>• 4”–12” outer pipe</li> </ul>	3”, 4”, 6”	<ul style="list-style-type: none"> <li>• ½”–6” inner pipe</li> <li>• 2”–10” outer pipe</li> </ul>
<b>Material</b>	<ul style="list-style-type: none"> <li>• Polypropylene Non-Flame Retardant Pipe (PPNFR)</li> <li>• Polypropylene Flame Retardant (PPFR)</li> <li>• Polyvinylidene Fluoride (PVDF)</li> </ul>	Clear Polyvinyl Chloride (PVC)	<ul style="list-style-type: none"> <li>• Polyvinyl Chloride (PVC) Grey</li> <li>• Chlorinated Polyvinyl Chloride (CPVC)</li> <li>• Clear Polyvinyl Chloride (Clear PVC)</li> </ul>
<b>Pressure rating</b>	<ul style="list-style-type: none"> <li>• 30 foot (15 PSI) maximum head pressure test for DWV applications</li> <li>• Up to 50 PSI for pressure waste applications (subject to manufacturers review of design)</li> </ul>	<ul style="list-style-type: none"> <li>• 32 PSI for PVC bonded termination</li> <li>• 5 PSI for flexible terminations</li> </ul>	<ul style="list-style-type: none"> <li>• Varies by size (primary)</li> <li>• 50 PSI (secondary)</li> </ul>
<b>Operating temperature</b>	PP: 32°F–212°F (0°C–100°C) PVDF: 32°F–280°F (0°C–138°C)	Containment pipe: 32°F–140°F (0°C–60°C)	PVC Schedule 80 and 40: 32°F–140°F (0°C–60°C) CPVC Schedule 80: 32°F–200°F (0°C–93°C)
<b>Joining technology</b>	Electrofusion	Adhesive Joint	Solvent (Cement) Weld
<b>Standards</b>	PP: <ul style="list-style-type: none"> <li>• ASTM D635</li> <li>• ASTM D1222</li> <li>• ASTM D1599</li> <li>• ASTM D3310</li> <li>• ASTM D4101</li> <li>• ASTM F1290</li> <li>• ASTM F1412</li> <li>• IGC 164-2001</li> </ul> PVDF: <ul style="list-style-type: none"> <li>• ASTM D635</li> <li>• ASTM E-84</li> <li>• ASTM F1673</li> <li>• UL 723</li> <li>• UL 94-VO</li> </ul>	ASTM D1784 ASTM D3034 UL 94 40CFR80 ASME B31.3 compliant	ASTM D1784 ASTM D1785 ASTM D2467 ASTM F441 ASTM F439 NSF 14 NSF 61 ASME B3.1 compliant
<b>Leak detection available</b>	Yes	Yes	Yes
<b>Applications</b>	<ul style="list-style-type: none"> <li>• Double-contained corrosive waste drainage</li> <li>• Life sciences</li> <li>• Chemical process industry</li> <li>• Food and beverage</li> </ul>	<ul style="list-style-type: none"> <li>• Chemical process line containment</li> <li>• Corrosive chemical waste containment</li> <li>• Petroleum chemical containment</li> <li>• New installations or retrofit of existing system</li> <li>• Life sciences</li> <li>• Microelectronics</li> </ul>	<ul style="list-style-type: none"> <li>• Water and wastewater treatment</li> <li>• Chemical processing, delivery and dosing</li> <li>• Microelectronics</li> <li>• Metal plating and surface finishing</li> <li>• Life sciences</li> </ul>

Fuseal Squared®

# Double Containment Polypropylene Corrosive Waste Piping System

## Overview

Fuseal Squared double containment piping is an ideal choice for corrosive waste conveyance systems where secondary containment is required or desired. It offers the same performance and reliability our customers have come to expect from the Fuseal drainage system.

Depending on the application, Fuseal Squared is available in non-flame and flame-retardant versions (PPNFR and PPRF). The pipe's standard wall thickness makes it ideal for buried applications, where the non-flame retardant type may also be suitable. The system sizes range from 1½" x 4" to 8" x 12".

Fuseal Squared is easy to install. The system is precision manufactured and GF's state-of-the-art Electro Plus electrofusion machine makes the process of fusing joints straightforward. Should it be required, GF can quickly design and produce custom fittings and sizes in our in-house custom fabrication department.

After installation, the primary pipe is tested hydrostatically, while the containment pipe is tested with low-pressure air.

Fuseal Squared is truly a complete acid waste drainage system!

### Fuseal Squared® benefits

- Free floating primary pipe for easy joint fit-up and field flexibility
- Strength: fittings are factory-constructed using butt-welded joining techniques for primary joints
- Fittings are 100% tested at factory
- Reliable electrofusion system for consistent joining
- Handles temperatures up to 212°F (100°C) intermittently
- Excellent chemical and corrosion resistance due to polypropylene material in primary and containment, or polyvinylidene fluoride in primary (optional)
- Connects to Fuseal without the need for special fittings or tools
- GF quality, field support, and factory engineering

## Applications

Fuseal Squared's chemical and physical properties make it an ideal and complete solution for handling corrosive, chemical waste in buried laboratory and industrial DWV applications. Fuseal Squared is suitable for use in virtually every application where acids, bases, and solvents are drained and where environmental protection is key.



## Electrofusion joining method

Electrofusion is the joining process where two plastic parts are fused, using electrical heat resistance, to form a permanent joint.

The electrofusion joint consists of a coupling or fitting with a coated copper wire coil inside.

The pipe is inserted into the fitting socket and an electric current is applied to the coil, producing heat that generates sufficient temperatures to melt the surrounding plastic and create a "melt zone."

Fusion occurs when the joint cools below the melt temperature of the plastic material, leaving a permanent joint that is proven to be as strong as, if not stronger than, the individual components.

### Electro Plus® fusion machine benefits

- Intuitive user interface
- Multiple joint capability for speedy installations
- Integral carrying case for ease of transportation
- Network and generator compatible for simple operation
- Self-diagnostic system takes the guesswork out of error detection
- Fusion cycle times automatically adjusted based on ambient temperature (ATC)
- One-button repeat fusion cycle for same size joints

Double-See™

# Vinyl Double Containment Piping System

## Overview

Double-See is fast and easy to install, and is available with a complete selection of pipe, fittings, leak detection and access tees, closure couplings, and termination fittings. 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×PVC, CPVC×PVC, CPVC×CPVC) with Clear PVC always being an option for the containment pipe. System size options range from ½”×2” to 6”×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

## Double-See™ benefits

- Installation is fast and easy
- Revolutionary closure coupling design for practical compliance with ASME B31.3
- Innovative centralizer design for thermal expansion compensation
- Flexible choice of PVC, CPVC, and Clear PVC
- Pipe cut-length guidance system for easy installation
- Factory assembled and 100% tested fittings
- Extensive standard part selection
- Customer fabrications and pipe spooling available
- Improves safety by eliminating chemical interaction with employees
- Double-See can be applied above or below ground
- GF quality, field support, and factory engineering



## Applications

The versatility of Double-See makes it an ideal containment system for water and wastewater treatment, chemical processing, delivery and dosing, microelectronics, metal plating and surface finishing, and life sciences applications.

## Leak Detection Systems

### For use with all GF containment piping

GF can automate your leak detection with complete point and continuous detection systems, including fittings, alarm boxes and sensors. Options include visual and audible alarms, and the system can tie in directly to building automation systems.



Contain-It™

# Easy and Reliable Secondary Containment Piping System

## Contain-It™ benefits

- Split pipe and fittings allow retrofit
- Fits over virtually any metal or plastic carrier pipe
- Lightweight, easy to install
- Interlocking construction
- Engineered bonding media channels and pre-drilled injection ports
- Quick and easy fitting clips
- Clear construction for visual leak detection
- GF quality, field support, and factory engineering

## Applications

The retrofit capability and chemical resistance of Contain-It make this an ideal choice for containment piping of chemical process lines.

When you combine the advantages of Contain-It with the complete line of thermoplastic piping systems from GF, you'll see that you can use "one source" for all your process and waste piping needs.

## Overview

### Split Pipe and Fittings

With pipe split along its length, the Contain-It piping system can be installed over virtually any carrier system. The carrier system can be tested without interference from the containment piping. Any leaks found during testing can be easily repaired. Leak detection cable can be installed as the split components are assembled, eliminating the need for time consuming cable pulling or the inclusion of lines to pull the cable. Containment piping can be retrofitted over plastic and metallic systems above and below ground, protecting employees, equipment and the environment. Split pipe and fittings are available in 3", 4" and 6".

### Solid Pipe

Solid pipe may be combined with split fittings in installations which do not require retrofit capability or where it is preferred to pull a leak detection cable. Solid pipe is available in 3", 4" and 6".

### Flexible Adapter

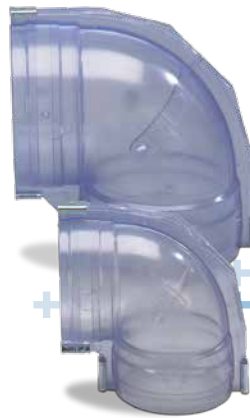
Flexible adapters allow connection to metal or chemical resistant plastic carrier systems other than PVC.

### Centralizer

Centralizers center and support the carrier pipe. They are available for IPS, metric and CTS carrier pipes.

## Injection Bonding System

The Injection Bonding System provides a controlled application of the bonding media, eliminating the mess usually associated with brush-applied resins and solvent cements. The bonding media is injected into the interlocking groove found on split pipe and interlocking channel found on split fittings to provide a leak-free seal.



+GF+

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