

GF Piping Systems

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Fuseal[®] Corrosive Waste Piping System

// Pipe, Fittings, Accessories
// Electrofusion
// Mechanical Joint





Fuseal® polypropylene piping system

Easy and reliable solution for corrosive waste piping systems

Excellent corrosion, chemical, and environment resistance

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..

In above ground installations, the pigmentation protects the system from sunlight. The pigmentation is highly resistant to ultraviolet radiation and is heat-stabilized to provide long life while handling hot reagents.

High temperature rating

Fuseal handles corrosive drainage fluids up to 212°F (100°C) intermittently, continuous service up to 180°F (82°C).

Applications

Excellent chemical and physical properties make the Fuseal PP system ideal for handling corrosive chemical waste solutions present in laboratory and industrial DWV applications. Fuseal PP is suitable for use in chemical and industrial plants as well as in food and beverage, hospital and university laboratories, anywhere where mixtures of acids, bases and solvents are drained. Fuseal PP is replacing many metallic waste systems that are failing due to corrosion.



Benefits

- Low installation cost with maintenance-free service
- Chemical and corrosion resistance
- Flame retardant PP (above grade), non-flame retardant PP (below grade)
- High temperature, intermittent discharges up to 212°F (100°C), continuous up to 180°F (82°C)
- Can be used for pressurized drainage applications up to 50 psi
- Both electrofusion and mechanical joints
- Easy-to-operate, highly reliable electrofusion machines

Fields of application

- Corrosive waste drainage
- Life sciences
- Chemical process industry
- Shipbuilding/marine
- Food and beverage

Product range

Fittings	Connection	Size	Material
Fuseal	New electrofusion locking collar	1 ½"–6"	Flame retardant polypropylene
Fuseal LD	Electrofusion loose coil Butt fusion	8"–14" 16"–18"	Flame retardant and non flame retardant polypropylene
Fuseal MJ	Mechanical joint	1 ½"–4"	Flame retardant polypropylene
Pipes		Size	Material
Schedule 40		1 ½"–12"	Flame retardant polypropylene
Schedule 80		1 ½"–6"	Flame retardant polypropylene
Schedule 40		1 ½"–18"	Non flame retardant polypropylene
Schedule 80		1 ½"–12"	Non flame retardant polypropylene

Electrofusion process

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

A plastic coated copper wire is wound into a coil and is then inserted into a fitting socket.

The pipe is then 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."

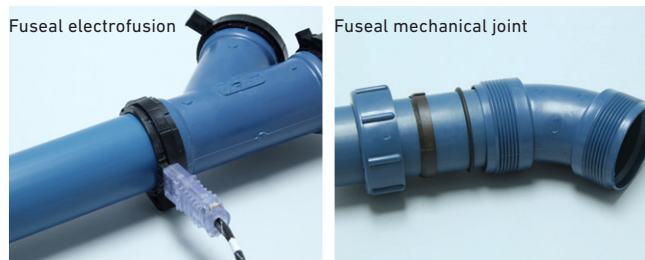
Fusion occurs when the joint cools below the melt temperature of the plastic material, leaving a permanent joint that is proven to be as strong as, if not stronger than, the individual components.

Mechanical joint

Make fast, leakproof joints in two easy steps. Slide the nut, grab ring and seal ring on the pipe. Insert the pipe into the socket and tighten. That's it!

As the nut is tightened, the grab ring grips the pipe and prevents the o-ring from displacing. Further tightening seals the o-ring to ensure a leakproof joint.

This simple method of joining cuts installation time in half and requires no electricity, or pipe grooving.



The perfect union

An engineer or contractor can combine the benefits of the Fuseal electrofusion joint and the mechanical joint in a single system. Fuseal can be used in inaccessible areas: Fuseal mechanical joint works well under benches, where speed of installation or future disassembly is needed.

One of the advantages for installers is that one fusion machine can do all their laboratory needs: Fuseal PP and Fuseal 25/50™ for corrosive waste and in plenums, Fuseal Squared® for double containment and PPro-Seal™ PP for DI water loops.

Electro Plus fusion machine



Electro Plus® fusion machine

- 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
- Automatic compensation for ambient temperature
- One-button repeat fusion cycle for same size joints
- Use to install Fuseal PP, Fuseal 25/50, Fuseal Squared special waste piping systems as well as PPro-Seal™ natural PP process water piping systems

Fuseal fusion locking collar

The rotatable collar which contains the electrofusion coil, has been strengthened and now locks in place. The coil and its electrical connector still rotate for convenience, but can better handle the tough conditions during installation in the field.

The many improved benefits include:

- Strengthened coil
- Locking groove on fitting hub
- Four tabs molded into collar locks into the grooves on fitting hub to resist axial motion while allowing for 360° collar rotation.
- Four slots allow visual confirmation of collar location on fitting



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