Fuseal®
Corrosive Waste Piping System

→ Pipe, Fittings, Accessories
→ Electrofusion
→ Mechanical Joint
Improved Fuseal Fusion Collar

The Fuseal Process has been improved through the development of the Fuseal fusion collar. The new fusion collar provides the same joint as the original Fuseal coil, however, it can be made in less time.

The many improved benefits include:
- Fast positive electrical connection with a clear duplex plug
- Simple insertion of pipe without coil removal
- Elimination of socket sanding
- Elimination of the temporary band clamp — clamps are provided with each fusion collar for sizes 1½” - 3”
- Rotation of fusion collar allows exact positioning of the duplex plug
- Ability to dry fit an entire system prior to fusion

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,” as shown in Figure 1.

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 Offers

- 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

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 ½ turn past hand tight. That’s it!

As the nut is tightened, the grab ring grips and cuts a retaining groove in the pipe. Further tightening seals the polypropylene ring to ensure a leakproof joint.

This simple method of joining cuts installation time in half and requires no hot water, electricity, or pipe grooving.
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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 and the Fuseal mechanical joint works well under bench where speed of installation or future disassembly is needed.

The same Electro Plus machine can be used to fuse the PPro-Seal™ Natural Polypropylene Piping System. PPro-Seal is a pressure system (up to 150 psi, 10 bar) which can handle the same fluids as Fuseal.

**Flame Retardant Polypropylene**

The Fuseal flame retardant polypropylene compound yields a combination of high chemical resistance, toughness and high strength at elevated temperatures.

**High Temperature Rating**

Fuseal handles corrosive drainage fluids up to 212°F (100°C) intermittently.

**Excellent Corrosion, Chemical and Environment Resistance**

Fuseal 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 affect on the Fuseal system. In general, Fuseal is attacked only by strong oxidizing acids and weakened by certain organic solvents and chlorinated hydrocarbons. Fuseal will not rust, pit, scale, corrode or be affected by electrolysis.

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.

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### Product Range

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Applications

Excellent chemical and physical properties make the Fuseal system ideal for handling corrosive chemical waste solutions present in laboratory and industrial DWV applications. Fuseal is suitable for use in chemical and industrial plants as well as in hospital and university laboratories where mixtures of acids, bases and solvents are drained.

Specification for Fuseal Piping System

Pipe and fittings shall conform to the requirements of ASTM F-1412, standard specification for polyolefin pipe and fittings for corrosive waste drainage systems.

All fittings shall be manufactured by George Fischer Sloane so they are compatible with Fuseal pipe. The system shall be joined by the use of electrical resistance coils energized by a variable low voltage power supply via a duplex connector. Each fusion collar will be furnished with a band clamp for sizes 1½”–3”.

Double Containment System for Optimum Protection

For optimum protection of the environment, the Fuseal System can be combined with the unique Contain-It™ Secondary Containment Piping System. Due to its split fittings and pipe, the clear PVC system can be installed even after the Fuseal system is tested.

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