

Technical Note PP 750-TN-02

COMPATIBILITY FUSION

SIDEWALL FUSION OF DriscoPlex[®] PE 3408/PE4710 Fittings TO DRISCOPIPE[®] 7000 and DRISCOPIPE[®] 8000 PIPE

The compatibility fusion procedure recommended below was tested and qualified in accordance with D.O.T., Title 49 C.F.R., 192.283.

Refer to Performance Pipe Bulletin #750 for information on preparation and precautions.

COMPATIBILITY FUSION

HEATING SURFACE TEMPERATURE: 490° - 510° F

NOTE: The use of an insulated heat shield is required for this fusion.

A saddle fusion machine (application tool/unit) is required.

1. **Preparation.** Clean the area of pipe and fitting to be fused with a clean cotton cloth or paper towel. Remove all foreign matter. Install and secure the application tool onto the pipe main according to the tool manufacturer's instructions. Abrade the fusion surface of the fitting base and the mating surface of the main pipe with 50-60 grit utility cloth. It is necessary to completely remove a thin layer of the material from both surfaces. After abrading, brush the residue away with a clean dry cloth or paper towel. **Do not touch the clean abraded surfaces with your hands.**
2. **Install** and lightly clamp the fitting in the application tool. Move the fitting base against the main pipe, and apply moderate force (around 100 lbs) to seat the fitting against the main pipe and in the application tool. It may be necessary to wiggle the fitting to be sure it is completely seated and squarely aligned against the main. While maintaining force, secure the fitting in the saddle application tool. Move the fitting away from the main. Install the correct heating adaptors for the pipe size being used. Check heater plate for proper surface temperature. Clean face of heater adaptors with clean cotton cloth or paper towel.
3. **Verify** the correct Bead-up Force, Heating Force and Joining Force for the saddle fitting being used. Bead-up Force, Heating Force and Joining Force can be found listed on the fitting label or on our web-site www.performancepipe.com section PP33, PP34 and PP35.
4. **Heating.** Center the heating tool beneath the fitting base and place it on the pipe main. Install the insulated heat shield between the fitting and the heating tool. Apply and maintain the Bead-up Force on the Driscopipe[®] 8000 and or Driscopipe 7000 series main until a melt pattern can be seen at the crown of the main. Remove the heat shield and bring the fitting into contact with the heating tool and pipe. Re-apply the Bead-up Force and maintain until a slight melt appears around the base of the fitting. Reduce the pressure from Bead-up Force to Heating Force (which is always zero) and continue the heating until about 1/16" bead is visible all around the fitting base.
5. **Fusion and Cooling.** When the heating period ends, quickly separate the heating tool from the fitting and the main pipe and remove the heating tool. Quickly inspect the melt on the main pipe and fitting base, and (within 3 seconds) move the fitting against the main pipe and apply Joining Force. **DO NOT SLAM.** Maintain Joining Force for the recommended cooling time. Maintain pressure until the joint has cooled. Until finger can comfortably remain on the bead.

Qualification Test Results Sidewall Fusion

2" DR 11 Driscopipe® 8000 pipe
2 x ½ Driscopipe® 8100 Tapping Tee

Lateral Force, ASTM F905

Six samples were tested.

All samples tore material from the pipe wall with no failure in the sidewall fusion joint.

Sustained Pressure, ASTM D1598

Six samples tested at 1600psi at 73F – No pipe or fusion failure after 1000 hours of test.

Six samples tested at 1000psi at 140F – No pipe or fusion failure after 1000 hours of test.

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