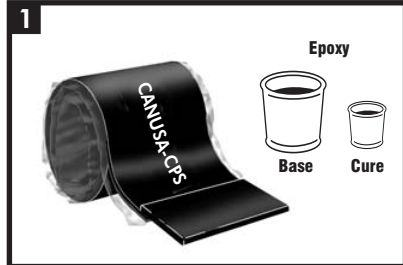


GTS-PP 100

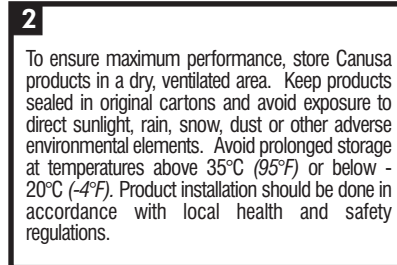
3-Layer High Performance Crosslinked Polypropylene Heat Shrink Sleeve System for the girth weld protection of 3-layer polypropylene coated pipelines

Product Description



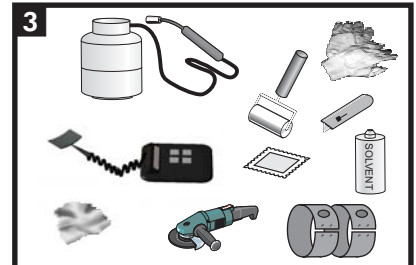
GTS-PP 100 sleeves are shipped pre-cut with a pre-attached closure. The sleeve adhesive is protected from contamination by an inner liner. The joint completion system includes an epoxy primer.

Storage & Safety Guidelines



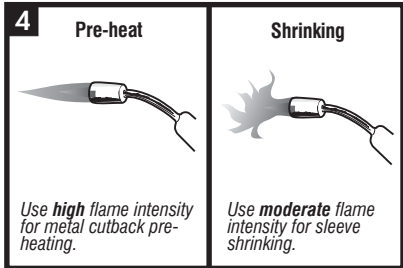
These installation instructions are intended as a guide for standard products. Consult your Canusa representative for specific projects or unique applications.

Equipment List

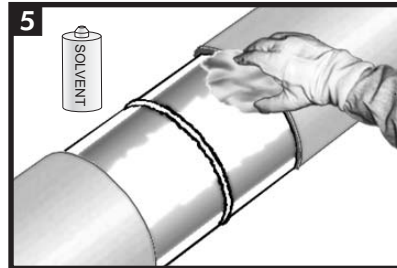


Propane tank, hose, torch & regulator
Power grinder with grind wheel of a Grade 40 grit rating
Canusa conductive bands
Digital thermometer with suitable probe
Knife, J roller, rags & approved solvent cleanser
Epoxy applicator pad, wet film thickness gauge
Standard safety equipment; gloves, goggles, hard hat, etc.

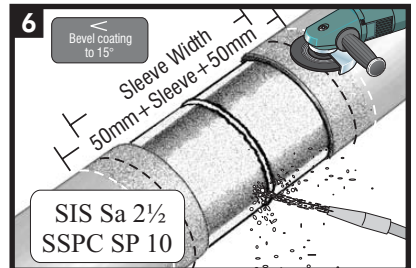
Flame Intensity



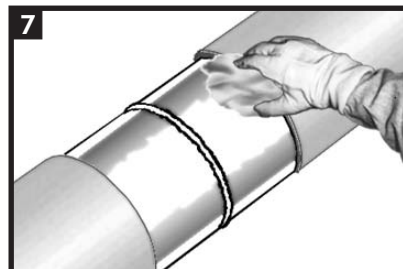
Surface Preparation



Ensure that the mainline coating edges are beveled to 30° minimum. If there is the presence of oil, grease, or other surface contaminants; clean the exposed steel and adjacent pipe coating with an approved solvent cleanser.

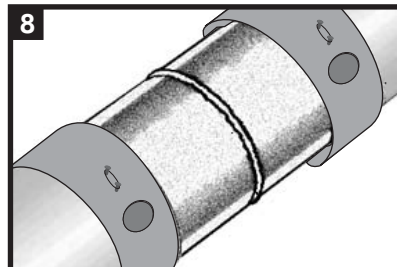


Warm the joint area to 40-50°C (104-120°F) (if necessary) before grit blasting. Thoroughly clean the weld area with a grit blaster to "near white metal" SIS Sa 2 1/2 or equivalent. Using the grinder ensure PP coating edges are beveled to 15° from the horizontal. Also using the grinder, abrade the mainline coating adjacent to the weld area to a distance 50mm (2") beyond the sleeve width.



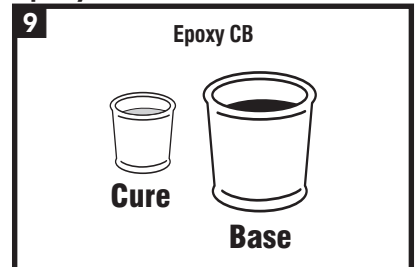
Using a dry, grease and lint-free cloth, wipe clean or air blast the steel and coated areas to remove foreign materials. If necessary, provide additional heat to ensure the surface temperature is 30-50°C (86-120°F).

Conductive Bands



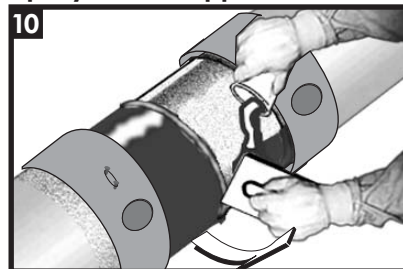
Wrap the conductive bands around the coating ensuring they are placed at the cutback edges.

Epoxy Primer



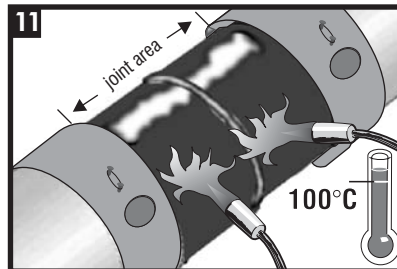
Follow the Preparation, Mixing and Application instructions provided with the supplied Canusa Epoxy. For bulk quantities: mix the primer cure with the primer base (4 parts base to 1 part cure by volume). Stir for a minimum of 30 seconds to assure uniform mixture.

Epoxy Primer Application



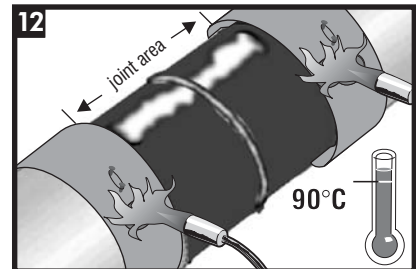
Apply mixed epoxy to a uniform specified thickness of 4-6 mils (100-150 microns) on all exposed bare metal using the applicator pads as supplied or an approved tool. Do not apply the epoxy to the mainline coating. Use a wet film thickness gauge to confirm the thickness.

Pre-Heat



Pre-heat the epoxy to a temperature of 100°C (194°F) with at least 2 propane torches or an induction heating coil. Use a contact pyrometer to verify the correct temperature has been reached. The conductive bands should stop direct flame from hitting mainline coating. If a film does develop on the mainline coating use a surface abrasion tool to remove it.

Preheat Temp may vary with project specific conditions.
During windy conditions, use a wind blocking device to ensure adequate pre-heat.



Heat the conductive bands with the propane torches, until underlying mainline coating reaches a temperature of at least 90°C. Use the sliding door to check temperature of mainline coating. Remove the conductive bands when finished.

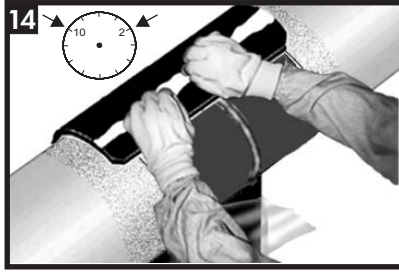
GTS-PP 100

Sleeve Installation Cont'd

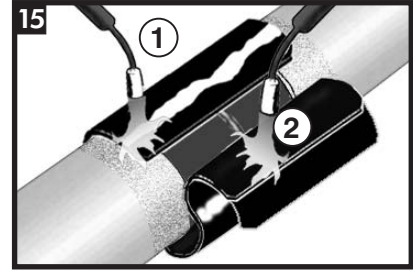


Remove the conductive bands. Partially remove the release liner [approximately 0.5m (1.5') from the edge] from the corner trimmed sleeve edge.

Unroll sleeve so that closure is on the inside of the roll before applying heat to other end of sleeve.

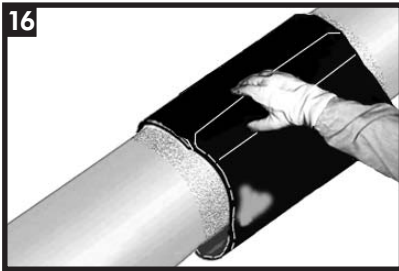


Place the underlap of the sleeve onto the joint, centering the sleeve such that the sleeve overlap is positioned at either the 10 or 2 o'clock position. Ensure that the sleeve is placed square to the pipe.

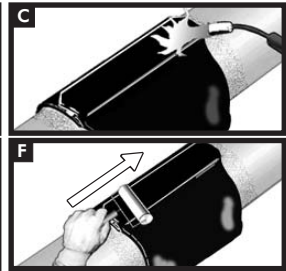
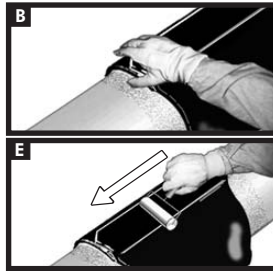
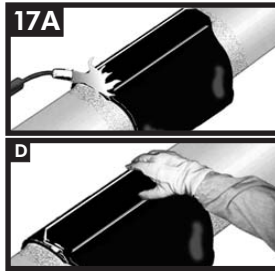


Remove the remaining sleeve release liner and wrap the sleeve loosely around the pipe, ensuring the appropriate overlap. Before finishing wrapping the sleeve:

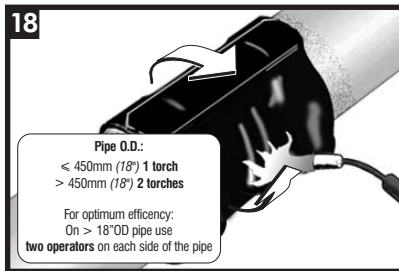
1. heat the backing side of the underlap until the backing starts to recover. Then use a roller to secure the underlap to the pipe.
2. gently heat the adhesive side of the closure seal until it appears glossy.



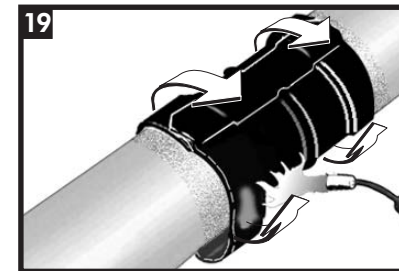
Firmly press the entire closure seal into place. Ensure that the closure is centred evenly over the underlap-overlap sleeve seam.



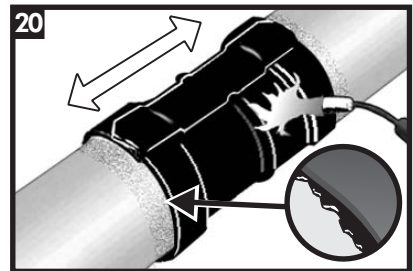
Gently heat the closure and pat it down with a gloved hand. Repeating this procedure, move from one side to the other. Smooth any wrinkles by gently working them outward from the centre of the closure with a roller.



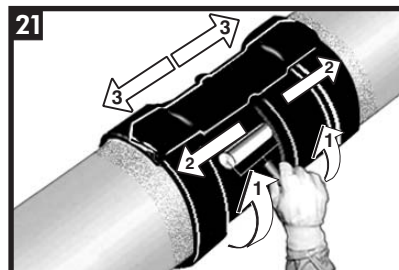
Using the appropriate sized torch, begin at the centre of the sleeve and heat circumferentially around the pipe. Use broad strokes. If utilizing two torches, operators should work on opposite sides of pipe.



Continue heating from the centre toward one end of the sleeve until recovery is complete. In a similar manner, heat and shrink the remaining side.

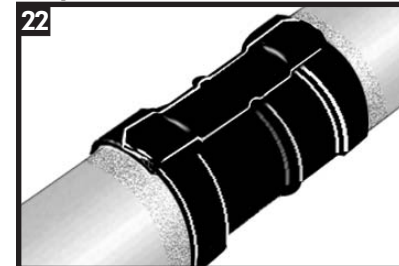


Shrinking has been completed when the adhesive begins to ooze at the sleeve edges all around the circumference. Finish shrinking the sleeve with long horizontal strokes over the entire surface to ensure a uniform bond.



While the sleeve is still hot and soft, use a hand roller to gently roll the sleeve surface and push any trapped air up and out of the sleeve, as shown above. Continue the procedure by also firmly rolling the closure with long horizontal strokes from the weld outwards.

Inspection



Visually inspect the installed sleeve for the following:

- Sleeve is in full contact with the steel joint.
- Adhesive flows beyond both sleeve edges and all around sleeve circumference.
- No cracks or holes in sleeve backing.

Backfilling Guidelines

After shrinking is complete, allow the sleeve to cool for 2 hours. Conduct Holiday testing to project specification, if required, prior to lowering and backfilling. To prevent damage to the sleeve, use typical soft soil or small pebble backfill. Revert to project specific backfill if different.



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