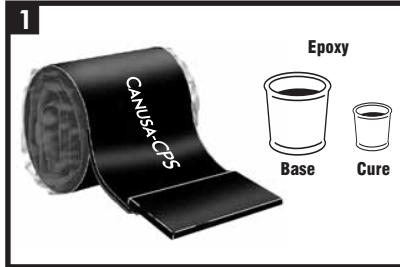


GTS-65 (3-Layer)

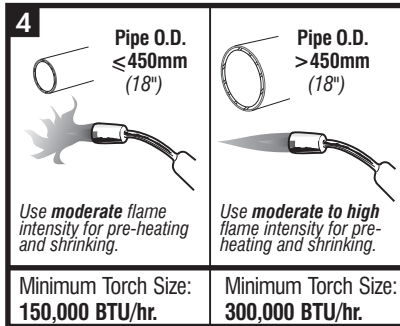
Global Transmission Sleeve

Product Description

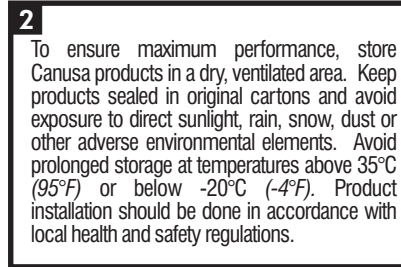


GTS-65 Global Transmission Sleeves are shipped pre-cut with a pre-attached closure. Bulk quantities are also available. The sleeve adhesive is protected from contamination by an inner liner. The joint completion system may also use an epoxy primer.

Flame Intensity & Torch Size



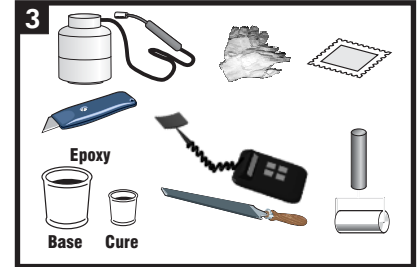
Storage & Safety Guidelines



To ensure maximum performance, store Canusa products in a dry, ventilated area. Keep products sealed in original cartons and avoid exposure to direct sunlight, rain, snow, dust or other adverse environmental elements. Avoid prolonged storage at temperatures above 35°C (95°F) or below -20°C (-4°F). Product installation should be done in accordance with local health and safety regulations.

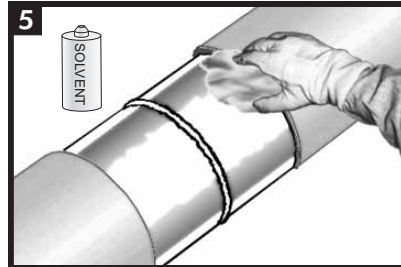
These installation instructions are intended as a guide for standard products. Consult your Canusa representative for specific projects or unique applications.

Equipment List

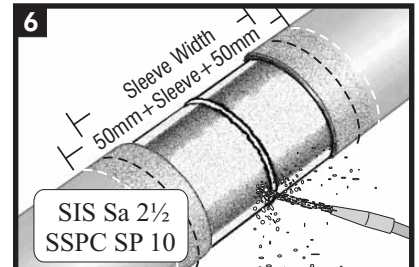


Propane tank, hose, torch & regulator
Appropriate tools for surface abrasion
Epoxy application accessories & wet film thickness gauge
Knife, roller, rags & Canusa approved solvent cleanser
Digital thermometer with suitable probe
Standard safety equipment: gloves, goggles, hard hat, etc.

Surface Preparation

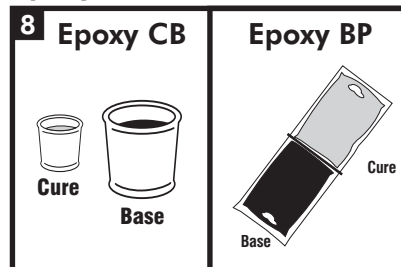


Ensure that the mainline coating edges are beveled to 30°. If there is the presence of oil, grease, or other surface contaminants; clean the exposed steel and adjacent pipe coating with a solvent cleanser.



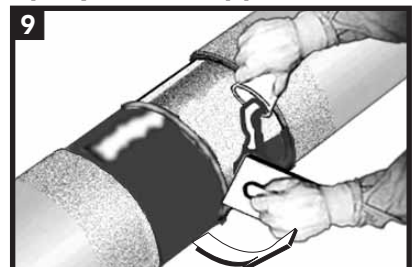
Warm the joint area to 40-50°C (100-120°F) before grit blasting. Thoroughly clean the weld area with a sand or grit blaster to "near white metal" SIS Sa 2½ or equivalent. Abrade the mainline coating adjacent to the weld area to a distance 50mm (2") beyond the sleeve width.

Epoxy Primer



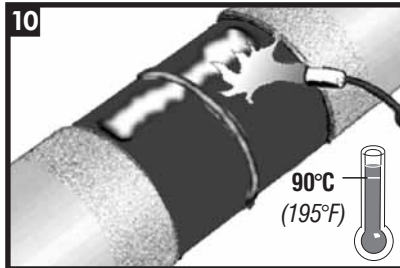
Follow the Preparation, Mixing and Application instructions provided with the supplied Canusa Epoxy Pack. For bulk quantities: mix the primer cure with the primer base (4 parts base to 1 part cure **by volume**). Stir for a minimum of 30 seconds to assure uniform mixture.

Epoxy Primer Application



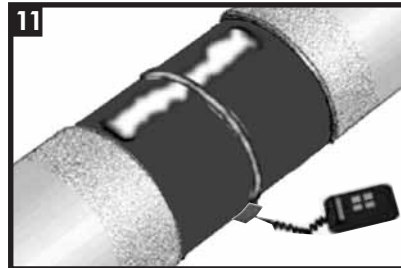
Apply mixed epoxy to a minimum uniform thickness of 4 mils on all exposed bare metal plus 10 mm (0.5") onto the adjacent pipe coating.

Pre-Heat

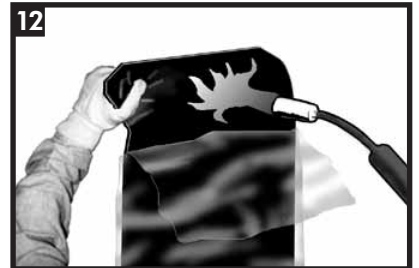


Pre-heat the epoxy and the abraded coating to 90°C +/- 5° (195°F +/- 10°) with the appropriate propane torch. This will substantially cure the epoxy and ensure proper flow and bonding of the sleeve adhesive. **Do not use an intense flame on the mainline coating.** If a film develops on the mainline coating because of preheat, use a surface abrasion tool to remove it.

Sleeve Installation



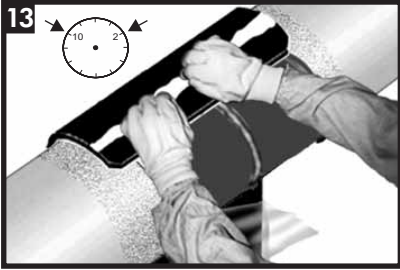
Check the temperature to ensure the preheat has been obtained on the entire pipe circumference. This preheat will substantially cure the epoxy and ensure proper flow and bonding of the sleeve adhesive. Ensure that the epoxy primer is dry to the touch prior to sleeve installation.



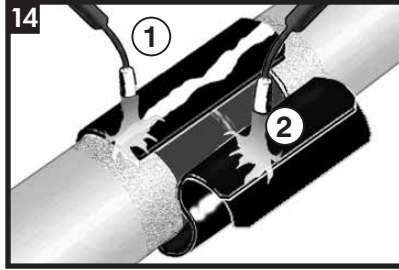
Partially remove the release liner and gently heat the underlap approximately 150 mm (6") from the edge.

GTS-65 (3-Layer)

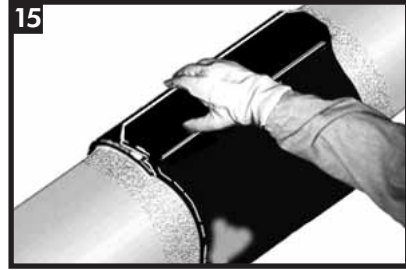
Sleeve Installation Cont'd



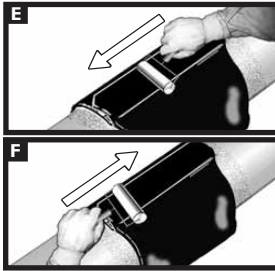
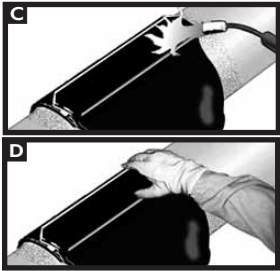
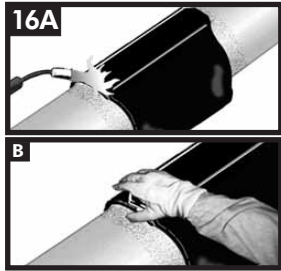
Centre the sleeve over the joint so that the sleeve overlaps between the 10 and 2 o'clock positions. Press the underlap firmly into place. Remove the remaining release liner.



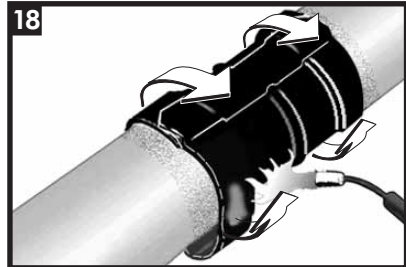
Wrap the sleeve loosely around the pipe, ensuring the appropriate overlap. Gently heat the backing of the underlap and the adhesive side of the overlap.



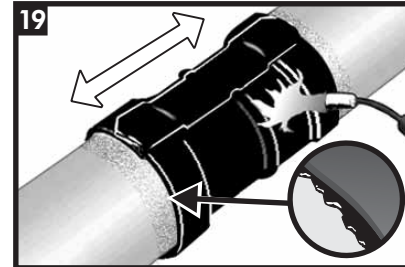
Press the closure firmly into place.



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.

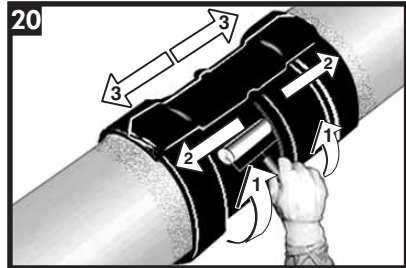


Continue heating from the centre toward one end of the sleeve until recovery is complete. In a similar manner, heat and shrink the remaining side.

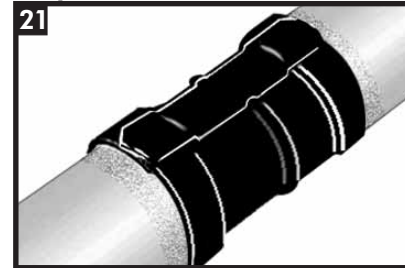


Shrinking has been completed when the adhesive begins to ooze at the sleeve edges all around the circumference. Finish shrinking the sleeve with long horizontal strokes over the entire surface to ensure a uniform bond.

Inspection



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.

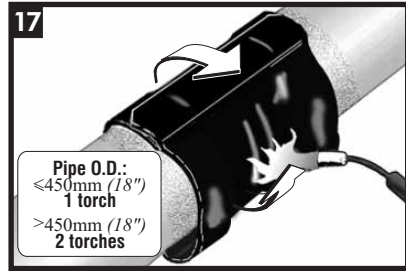


Visually inspect the installed sleeve for the following:

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

Backfilling Guidelines

After shrinking is complete, allow the sleeve to cool for 2 hours prior to lowering and backfilling. To prevent damage to the sleeve, use selected backfill material, (no sharp stones or large particles) otherwise an extruded polyethylene mesh or other suitable shield should be used.



Pipe O.D.:
 ≤450mm (18")
 1 torch
 >450mm (18")
 2 torches

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.

Epoxy Usage:

(300mm / 12" cutback and 0.15mm / 0.006" epoxy thickness)

Pipe diameter mm in	Quantity required	
	base (ml)	cure (ml)
115 4½	16	4
170 6.6	24	6
230 8.6	32	8
280 10¾	40	10
315 12¾	44	11
355 14	52	13
400 16	56	14
450 18	64	16
500 20	72	18
610 24	88	22
660 26	96	24
760 30	108	27
915 36	132	33
1060 42	152	38
1220 48	172	43
1420 56	200	50
1520 60	216	54

Epoxy required for 300 mm / 12" cutback.
 For other cutbacks, divide by 12 and multiply by new cutback in inches

Example:

200 mm (8") cutback on
 610 mm diameter pipe

base: $88 \text{ ml} \times \frac{8}{12} = 60 \text{ ml base}$

cure: $22 \text{ ml} \times \frac{8}{12} = 15 \text{ ml cure}$



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