

GTS-80/T

Global Transmission Sleeve

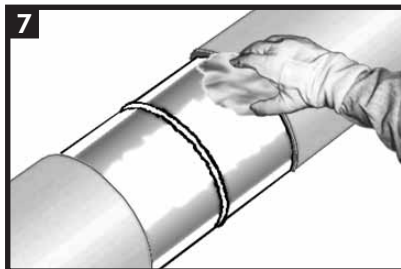
Product Description



GTS-80 Global Transmission Sleeves are shipped pre-cut with a pre-attached closure. Bulk quantities are also available. The adhesive is protected from contamination by an inner liner.

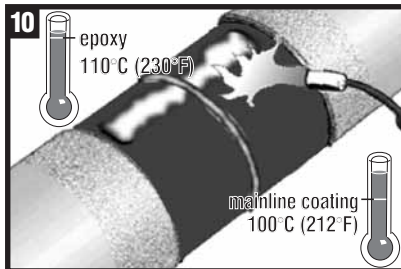
Flame Intensity & Torch Size

<p>4</p> <p>Pipe O.D. $\leq 450\text{mm}$ (18")</p> <p>Use moderate flame intensity for cutback pre-heating and shrinking.</p>	<p>Pipe O.D. $> 450\text{mm}$ (18")</p> <p>Use moderate to high flame intensity for cutback pre-heating and shrinking.</p>
<p>Minimum Torch Size: 150,000 BTU/hr.</p>	<p>Minimum Torch Size: 300,000 BTU/hr.</p>



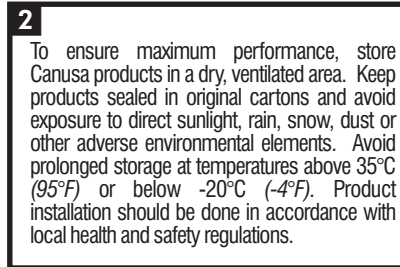
Wipe clean or air blast the steel and coated areas to remove foreign materials.

Pre-Heat



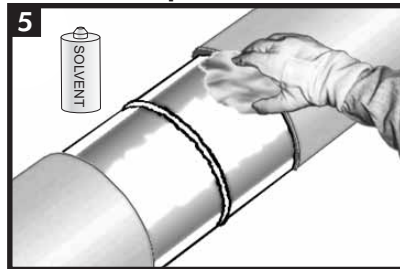
Preheat the epoxy to a temperature of 110°C (230°F) and the abraded mainline coating to be covered by the sleeve to a minimum of 100°C (212°F) with the appropriate propane torch, induction heating or infrared heating equipment. **Do not use an intense flame on the mainline coating.** If a film develops on the mainline coating because of preheat, use a surface abrasion tool to remove it.

Storage & Safety Guidelines



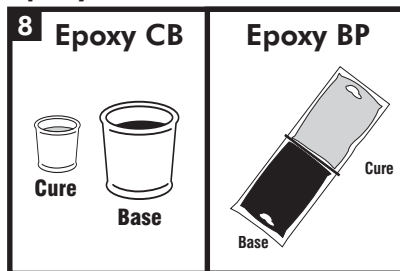
To ensure maximum performance, store Canusa products in a dry, ventilated area. Keep products sealed in original cartons and avoid exposure to direct sunlight, rain, snow, dust or other adverse environmental elements. Avoid prolonged storage at temperatures above 35°C (95°F) or below -20°C (-4°F). Product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

Surface Preparation



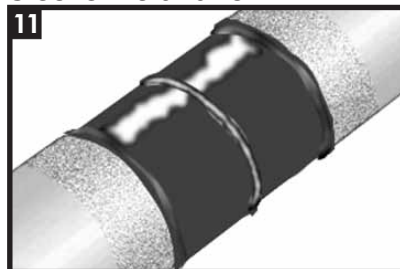
Ensure that the mainline coating edges are beveled to 30°. If there is the presence of oil, grease, or other surface contaminants; clean the exposed steel and adjacent pipe coating with a solvent cleanser.

Epoxy Primer



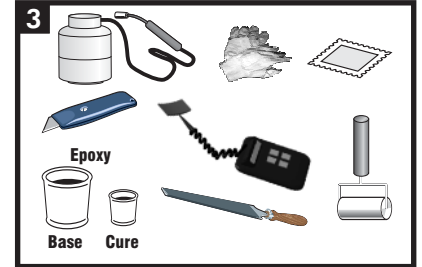
Follow the Preparation, Mixing and Application instructions provided with the supplied Canusa Epoxy Pack. For bulk quantities: mix the primer cure with the primer base (4 parts base to 1 part cure by volume). Stir for a minimum of 30 seconds to assure uniform mixture.

Sleeve Installation

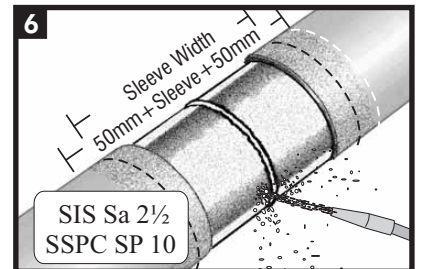


Ensure that the epoxy primer is dry to the touch prior to sleeve installation.

Equipment List

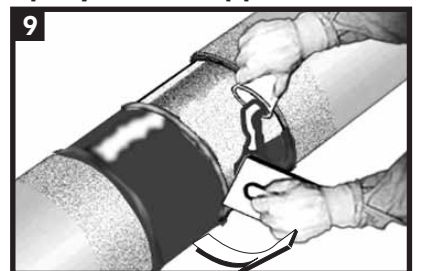


Canusa torch, propane tank, hose & regulator
Canusa E-Primer, thickness gauge
Mixing sticks, cups & applicator pads
Digital Thermometer with suitable probe, flat roller
Appropriate tools for abrasion (rasp, file, or sandpaper)
Standard safety equipment (gloves, goggles, hard hat, etc.)

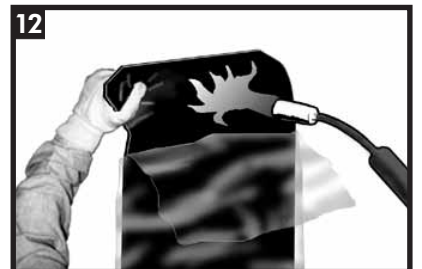


Warm the joint area to 40-50°C (100-120°F) before grit blasting. Thoroughly clean the weld area with a sand or grit blaster to "near white metal" SIS Sa 2 1/2 or equivalent. Abrade the mainline coating adjacent to the weld area to a distance 50mm (2") beyond the sleeve width.

Epoxy Primer Application



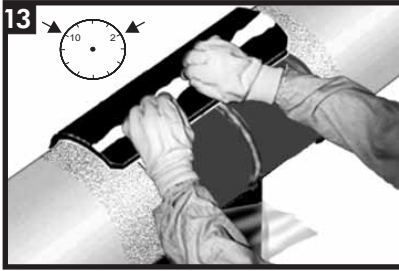
Apply mixed epoxy to a minimum uniform thickness of 4 mils on all exposed bare metal plus 10 mm (0.5") onto the adjacent pipe coating.



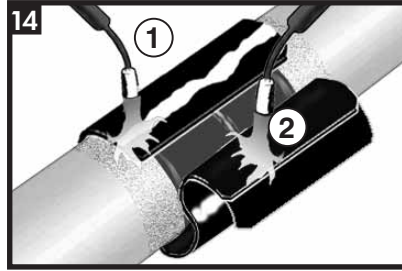
Partially remove the release liner and gently heat the underlap approximately 150 mm (6") from the edge.

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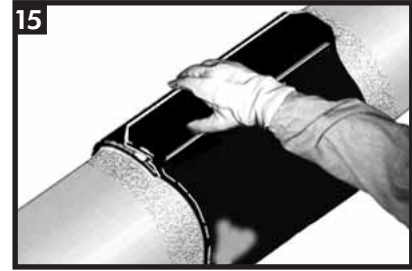
Sleeve Installation Cont'd



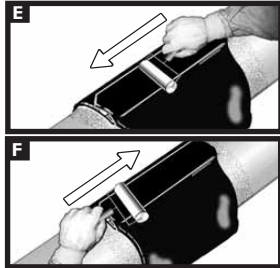
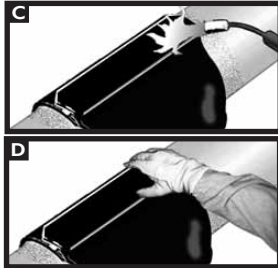
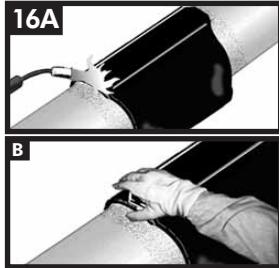
Centre the sleeve over the joint so that the sleeve overlaps between the 10 and 2 o'clock positions. Press the underlap firmly into place. Remove the remaining release liner.



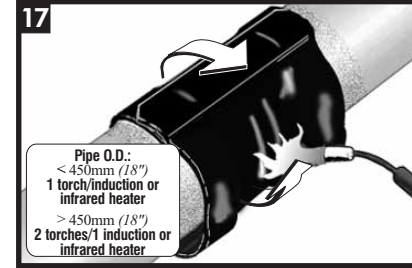
Wrap the sleeve loosely around the pipe, ensuring the appropriate overlap. Gently heat the backing of the underlap and the adhesive side of the closure.



Press the closure firmly into place.

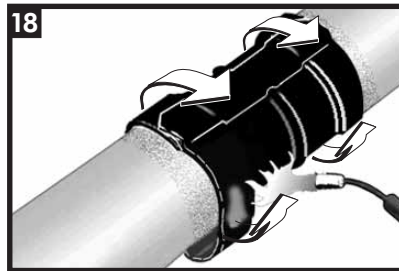


Gently heat the closure and pat it down with a gloved hand. Repeating this procedure, move from one side to the other. Smooth any wrinkles by gently working them outward from the centre of the closure with a roller.

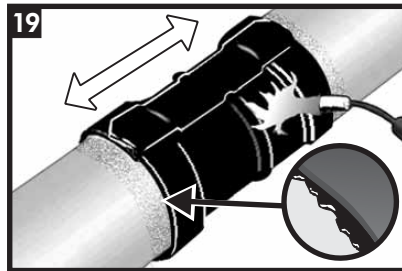


Pipe O.D.:
< 450mm (18")
1 torch/induction or
infrared heater
> 450mm (18")
2 torches/1 induction or
infrared heater

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.

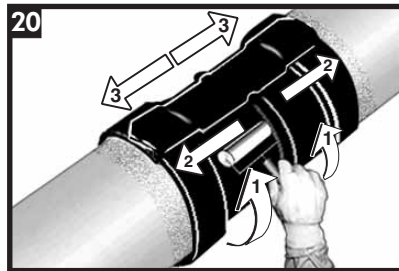


Continue heating from the centre toward one end of the sleeve until recovery is complete. In a similar manner, heat and shrink the remaining side.

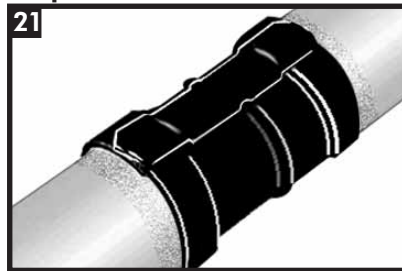


Shrinking has been completed when the adhesive begins to ooze at the sleeve edges all around the circumference. Finish shrinking the sleeve with long horizontal strokes over the entire surface to ensure a uniform bond.

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.

Epoxy Usage:

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

Pipe diameter mm in	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
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 ml x $\frac{8}{12}$ = 60 ml base

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



A SHAWCOR COMPANY

Canada

CANUSA-CPS
a division of SHAWCOR LTD.
25 Bethridge Road
Rexdale, Ontario
M9W 1M7,
Canada
Tel: +1 (416) 743-7111
Fax: +1 (416) 743-5927

U.S.A./Latin America

CANUSA-CPS
a division of SHAWCOR INC.
2408 Timberloch Place
Building C-8
The Woodlands, Texas
77380, U.S.A.
Tel: +1 (281) 367-8866
Fax: +1 (281) 367-4304

Europe/Middle East

CANUSA-CPS
a division of Canusa Systems Ltd.
Unit 3, Sterling Park
Gatwick Road
Crawley, West Sussex
England RH10 9QT
Tel: +44 (1293) 541254
Fax: +44 (1293) 541777

www.canusacps.com

Asia/Pacific

CANUSA-CPS
a division of SHAWCOR LTD.
#05-31, B1K 52, Frontier
Ubi Avenue 3
Singapore
408867
Tel: +65-6749-8918
Fax: +65-6749-8919

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