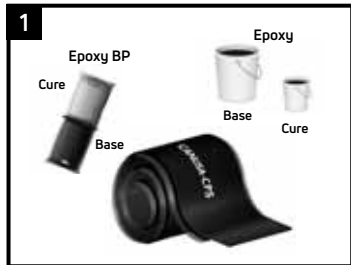


## GTS-65-EN (3-Layer)

### Global Transmission Sleeve

#### Product Description



GTS-65-EN Global Transmission Sleeves are shipped pre-cut with a pre-attached or separate closure. Bulk quantities are also available. When supplied in bulk refer to GTS-80-ISO Sleeve Cutting Guidelines for recommended closure dimension, sleeve cut lengths and corner cuts (15 mm x 50 mm - 0.6" x 2"). The sleeve adhesive is protected from contamination by an inner liner. The complete joint system also uses a liquid epoxy primer: Canusa Liquid Epoxy Type E-WF.

#### 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.

#### Flame Intensity & Torch Size



#### 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.

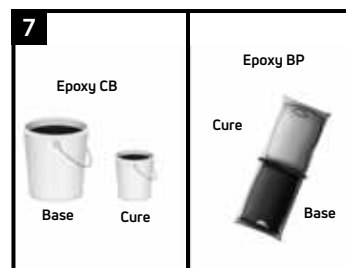


Warm the joint area to 40-50°C (100-120°F) before grit blasting. Thoroughly clean the weld area with a blaster to "near white metal" SIS Sa 2½ or equivalent. Abrade or sweep blast the mainline coating adjacent to the weld area to a distance 50 mm (2") beyond the sleeve width.



Using a dry, grease and lint-free cloth, wipe clean or air blast the steel and coated areas to remove foreign materials. For easy epoxy application pre-warm the steel surface to 60-70°C.

#### Liquid Epoxy



Follow the Preparation, Mixing and Application instructions provided with the supplied Canusa Epoxy Type E-WF Pack. For bulk quantities: mix the primer cure with the primer base 3 parts base to 1 part cure by volume. Stir for a minimum of 1 minute to assure uniform mixture.

#### Liquid Epoxy Application



Apply mixed Epoxy to a minimum uniform thickness of 6 mils on all exposed bare metal plus 10 mm (0.5") onto the adjacent pipe coating using the applicator pads as supplied or an approved tool.

#### Pre-Heat



Using an appropriately sized induction coil or propane torch(es), pre-heat the joint area (epoxy and parent coating) to a minimum of 90°C (195°F) until primer reaches a dry-to-touch state. Abraded parent coating must be reheated to a min. 90°C (195°F) if its temperature dropped during force curing of the epoxy. Do not use an intense flame on the mainline coating. If a film develops on the mainline coating because of excessive preheat, use a surface abrasion tool to remove it.

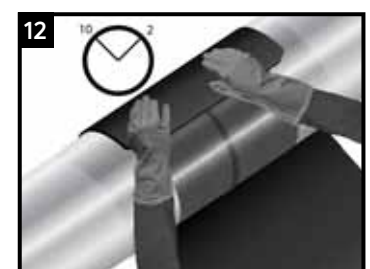
#### Sleeve Installation



Temperature must be checked to ensure that the epoxy and parent coating have reached the required minimum preheat of 90°C (195°F) on the entire pipe circumference. This preheat will substantially cure the epoxy and ensure proper flow and bonding of the sleeve adhesive.

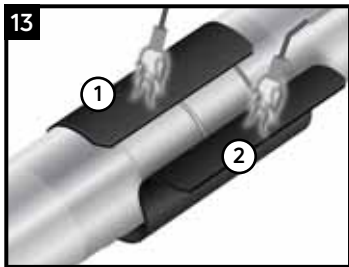


Gently heat the underlap approximately 150 mm (6") from the corner trimmed edge.



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.

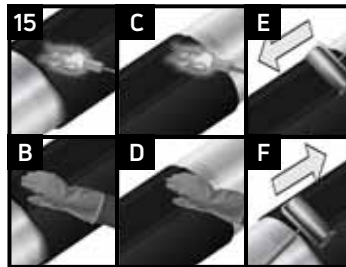
## Sleeve Installation Cont'd



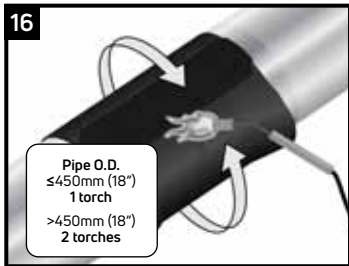
Wrap the sleeve loosely around the pipe, ensuring the appropriate overlap. Gently heat the backing of the underlap and the adhesive side of the overlap.



Press the closure firmly into place.

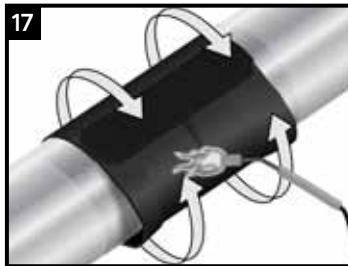


Gently heat the closure and pat it down with a gloved hand. Repeating this procedure, move from one side to the other. Smooth any wrinkles by gently working them outward from the centre of the closure with a roller.

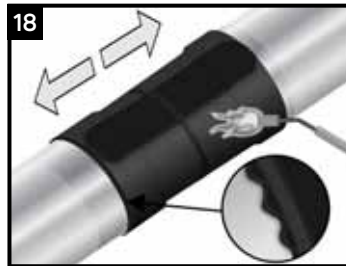


Pipe O.D.  
 ≤450mm (18")  
 1 torch  
 >450mm (18")  
 2 torches

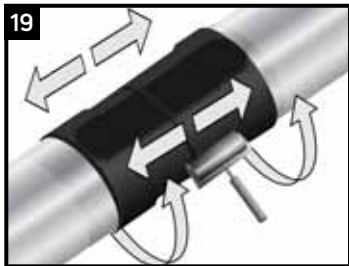
Using the appropriate sized torch, begin at the centre of the sleeve and heat circumferentially around the pipe. Use broad strokes. If utilizing two torches, operators should work on opposite sides of pipe.



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 silicized 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.
- 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

300 mm / 12 in. Welded Cutback  
 0.15 mm / 0.006 in. Epoxy Thickness  
 50% wastage ratio

Pipe Diameter		Quantity Required	
mm	in	Base (ml)	Cure (ml)
115	4½	18.7	6.2
170	6.6	27.5	9.2
230	8.6	35.8	11.9
280	10¾	44.6	14.9
315	12¾	52.9	17.6
355	14	58.1	19.4
400	16	66.4	22.1
450	18	74.7	24.9
500	20	82.9	27.6
610	24	99.5	33.2
660	26	107.8	35.9
760	30	124.4	41.5
915	36	149.3	49.8
1060	42	174.2	58.1
1220	48	199.1	66.4
1420	56	232.3	77.4
1520	60	248.8	82.9

Epoxy required for 300 mm / 12" cutback.

For other cutbacks, divide by 12 and multiply by new cutback in inches.

#### Example:

350 mm (13.8") cutback on 610 mm diameter pipe

base: 99.5 ml x 13.8/12 = 114.5 ml base

cure: 33.2 ml x 13.8/12 = 38.2 ml cure

## 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. For the GTS-65-EN Heat Shrink Sleeve, avoid prolonged storage at temperatures above 35°C (95°F) or below -20°C (-4°F). For the Epoxy, avoid prolonged storage at temperatures above 40°C (104°F) or below 5°C (41°F). Product installation should be done in accordance with local health and safety regulations. Additional information regarding product storage, can be found in the current version of Canusa's Technical Bulletin - Shipping, Handling, Storage & Shelf Life.

These installation instructions are intended as a guide for standard products. Consult your Canusa representative for specific projects or unique applications at [info@canuscps.com](mailto:info@canuscps.com).

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### Quality Management system registered to ISO 9001

Canusa warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the installation guide when used in compliance with Canusa's written instructions. Since many installation factors are beyond our control, the user shall determine the suitability of the products for the intended use and assume all risks and liabilities in connection therewith. Canusa's liability is stated in the standard terms and conditions of sale. Canusa makes no other warranty either expressed or implied. All information contained in this installation guide is to be used as a guide and is subject to change without notice. This installation guide supersedes all previous installation guides on this product. E&OE

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