

TBK-80-ISO

Advanced girth-weld protection for pipes used in directionally drilled applications.

Product Description



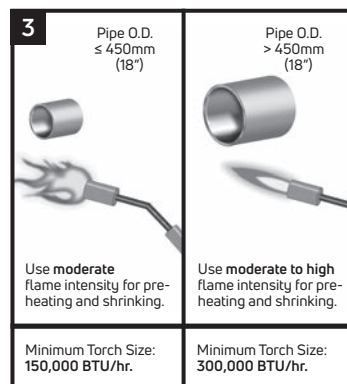
Canusa's TBK systems are composed of a primary sleeve, a sacrificial sleeve and liquid epoxy.

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



Use moderate flame intensity for pre-heating and shrinking.

Minimum Torch Size: 150,000 BTU/hr.

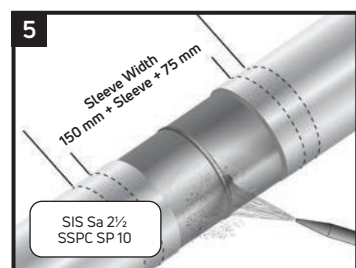
Use moderate to high flame intensity for pre-heating and shrinking.

Minimum Torch Size: 300,000 BTU/hr.

Surface Preparation



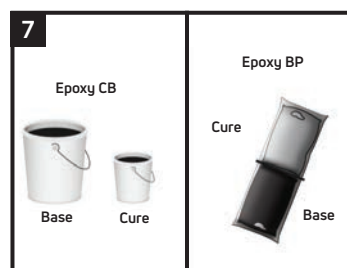
Ensure that the mainline coating edges are beveled to 30°. If there is the presence of oil, grease, or other surface contaminants; clean the exposed steel and adjacent pipe coating with a solvent cleanser.



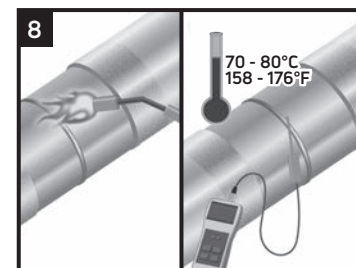
Warm the joint area to 40-50°C (100-120°F) before grit blasting. Thoroughly clean the weld area with a grit blaster to "near white metal" SIS Sa 2½ or equivalent. Abrade or sweep blast the mainline coating adjacent to the weld area to a distance that is at least 25 mm beyond the edge of all joint coating, which includes the primary and sacrificial sleeves.



Using a dry, grease- and lint-free cloth, wipe clean or air blast the steel and coated areas to remove foreign materials.

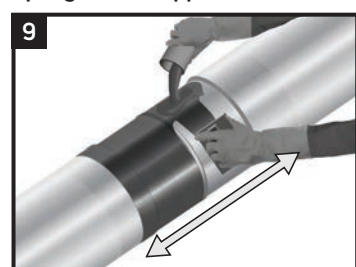


Follow the Preparation, Mixing and Application instructions provided with the supplied Canusa Epoxy Type S-80. For bulk quantities: mix the primer cure with the primer base (4 parts base to 1 part cure by volume). Stir for a minimum of 1 minute to assure uniform mixture.



Preheat the steel surface and abraded mainline coating to 70 – 80°C (158 – 176°F) with the appropriate propane torch or induction heating. When pre-heating using induction coil, flame brush of parent coating is necessary. In bad weather conditions proper shielding should be used around cutback (i.e. tent to shield from wind and/or rain).

Epoxy Primer Application

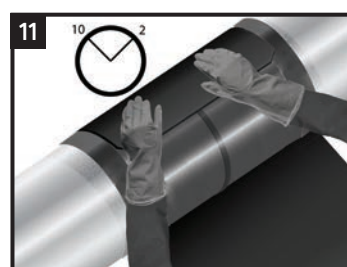


Apply mixed Epoxy to a minimum uniform thickness of 8 mils (200 microns) on all exposed bare metal and adjacent factory coating plus 25 mm on each side of the Primary sleeve using the applicator pads as supplied or an approved tool. The total applied epoxy width should be 50mm larger than the primary sleeve supplied width.

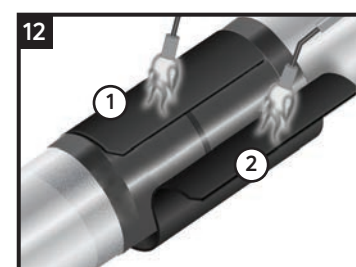
Sleeve Installation



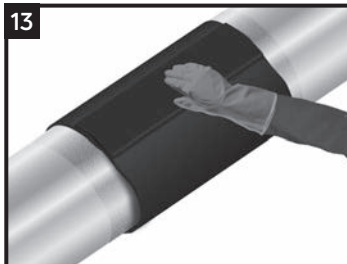
Gently heat the underlap approximately 150 mm (6") from the edge.



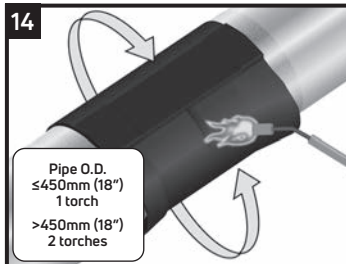
While applied epoxy primer remains wet, center the sleeve over the joint so that the sleeve overlaps between the 10 and 2 o'clock positions. Press the underlap firmly into place.



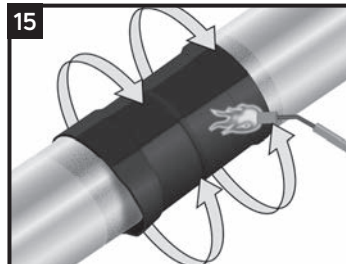
Wrap the sleeve loosely around the pipe, ensuring the appropriate overlap. Gently heat the backing of the underlap and the adhesive side of the overlap.



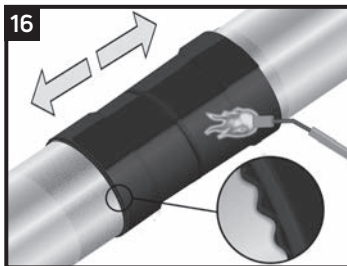
Press the closure firmly into place. Gently heat the closure and pat it down with a gloved hand. Repeating this procedure, move from one side to the other. Smooth any wrinkles by gently working them outward from the centre of the closure with a roller.



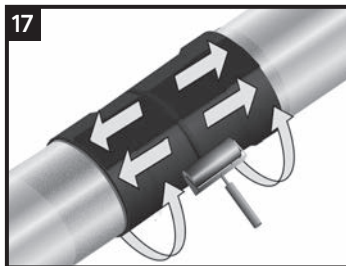
Using the appropriate sized torch, begin at the centre of the sleeve and heat circumferentially around the pipe. Use broad strokes. If utilizing two torches, operators should work on opposite sides of pipe.



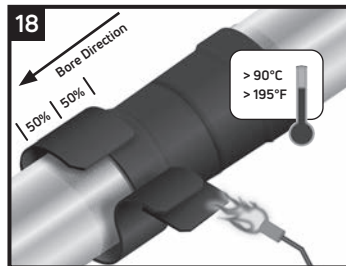
Continue heating from the centre toward one end of the sleeve until recovery is complete. In a similar manner, heat and shrink the remaining side.



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.

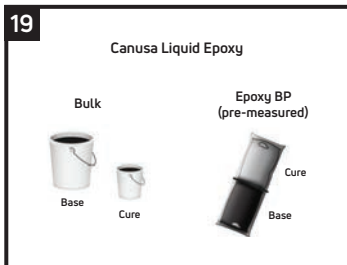


While the sleeve is still hot and soft, use a hand roller to gently roll the sleeve surface and push any trapped air up and out of the sleeve, as shown above. Continue the procedure by also firmly rolling the closure with long horizontal strokes from the weld outward.



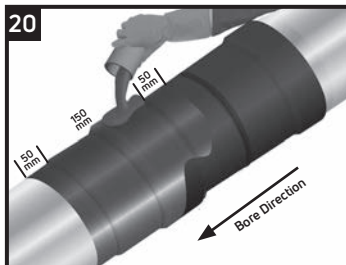
Ensure that the front 100 mm (4") of the primary sleeve and 100 mm (4") onto the coating is at the required temperature. Wrap the sacrificial sleeve so that half of the sleeve overlaps the primary sleeve and half of the sleeve extends onto the coating. Recover the sleeve as in steps 10 through 17, but position the closure on the opposite side of the pipe relative to the primary sleeve closure.

Epoxy (Overcoat) Mixing

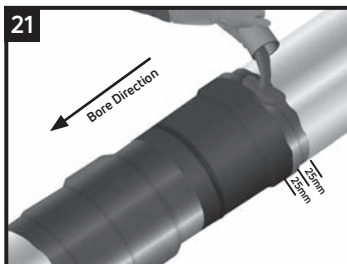


Follow the Preparation, Mixing and Application instructions provided with the supplied Canusa Epoxy Pack. For bulk quantities: mix the epoxy cure with the epoxy base (4 parts base to 1 part cure by volume). Stir for a minimum of 30 seconds to assure uniform mixture.

Epoxy (Overcoat) Application



When the sleeve is between 15 - 40°C, apply epoxy over the sacrificial sleeve to form a wear cone; covering 50mm (2") onto the pipe coating, the entire sacrificial sleeve and 50mm (2") onto the first sleeve. Epoxy applied should thoroughly cover the edge of the sleeves.



Apply epoxy to trailing edge of first sleeve; 25mm (1") onto sleeve, 25mm (1") onto adjacent coating. Epoxy applied should thoroughly cover the edge of the sleeves. It is best to allow the epoxy to cure at ambient temperature. If necessary, use a low flame to cure epoxy. Cover the entire sleeve with any left-over epoxy.



Visually inspect the installed system to ensure that:

- Sleeve is in full contact with the steel joint.
- Adhesive flows beyond all sleeves edges.
- No cracks or holes in sleeve backing.
- Complete epoxy coverage for the areas mentioned in step 20 & 21.

Useful Application Information

The sleeve system must be left to completely cool and epoxy fully cured before pipe is pulled through.

Avoid prolonged storage at temperatures below 5°C (41°F) or above 35°C (95°F). Do not freeze epoxies.

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 at info@canusacps.com.

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The United Arab Emirates

Quality Management system registered to ISO 9001

Epoxy Usage

Example of calculation: Quantity of liquid Epoxy Type S-80 required for installation of one TBK-80-ISO kit with main sleeve supplied in 450 mm width.

Cutback: Total width of 300 mm / 12 in.

Main Sleeve: Total width applied 500 mm

- WFT on Steel: 0.20 mm / 0.008 in.
- WFT on MLC: 0.15 mm / 0.006 in.

Overcoat: Total width applied 300 mm

- WFT: 0.25 mm / 0.010 in.

Wastage factor: 75% (Bulk) – 100% (BP)

Pipe Diameter		Quantity Required		Quantity of 170mL BP per joint
		Base (mL)	Cure (mL)	
114	4½"	83.0	20.8	1
168	6¾"	122.3	30.6	2
219	8¾"	159.2	39.8	2
273	10¾"	198.4	49.6	2
324	12¾"	235.3	58.8	3
356	14"	258.4	64.6	3
406	16"	295.3	73.8	3
457	18"	332.2	83.0	4
508	20"	369.1	92.3	4
610	24"	442.9	110.7	5
660	26"	479.8	120.0	5
762	30"	553.7	138.4	6
914	36"	664.4	166.1	7
1067	42"	775.1	193.8	8
1219	48"	885.9	221.5	9
1422	56"	1033.5	258.4	11
1524	60"	1107.3	276.8	11

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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