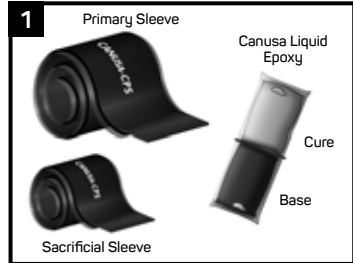


TBK-65/TBK-80/TBK-PE

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

Product Description



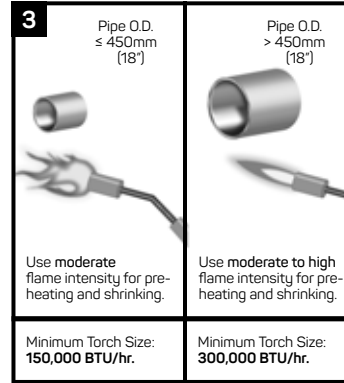
Canusa's TBK systems are composed of a primary sleeve, a sacrificial sleeve and liquid epoxy.

Equipment List



Canusa torch, propane tank, hose & regulator; Temperature measuring device, roller, knife; Appropriate surface abrasion device, solvent; Standard safety equipment (gloves, goggles, hard hat, etc.); Wet film thickness gauge

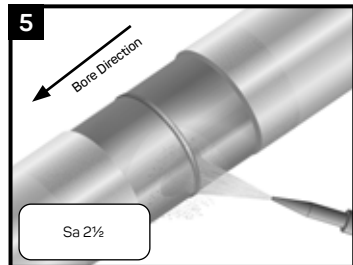
Flame Intensity & Torch Size



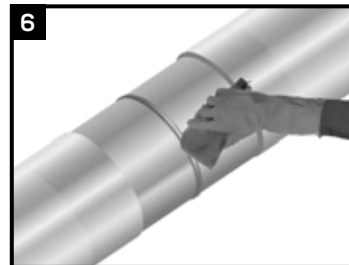
Surface Preparation



Ensure that the mainline coating edges are bevelled 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.

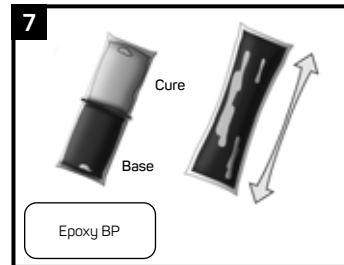


Ensure the pipe is dry before abrading. Thoroughly clean the weld area with a sand or grit blaster to "near white metal" SIS Sa 2½ or equivalent. Lightly abrade the mainline coating adjacent to the cutback edge to a distance that is at least 25 mm beyond the edge of all joint coating, which includes the primary and sacrificial sleeves.



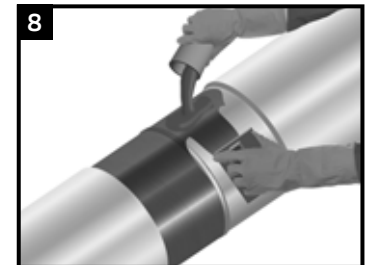
Using a dry, grease and lint-free cloth, wipe clean or air blast the steel and coated areas to remove foreign materials. If necessary, provide additional heat to ensure the surface temperature is 40-50°C (104-120°F).

Liquid Epoxy Mixing (if required)



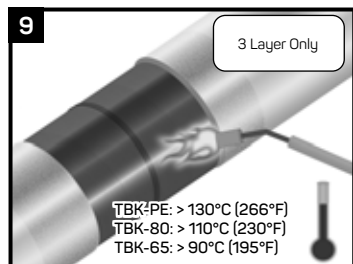
Follow the Preparation, Mixing and Application instructions provided with the supplied Canusa Epoxy Pack. For bulk quantities: mix the epoxy cure with the epoxy base (4 parts base to 1 part cure **by volume**). Stir for a minimum of 30 seconds to assure uniform mixture.

Liquid Epoxy Application (if required)



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.

Epoxy curing (if required) & Pre-Heat

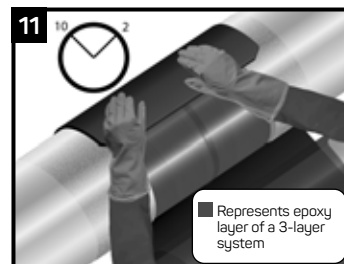


Pre-heat the joint area and abraded coating to the required temperature with the appropriate propane torch. If epoxy is applied, ensure that the epoxy is dry to the touch prior to sleeve installation. **Do not use an intense flame on the mainline coating.** If a film develops on the mainline coating because of preheat, use a surface abrasion tool to remove it.

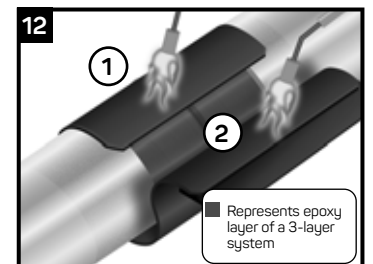
Primary Sleeve Installation



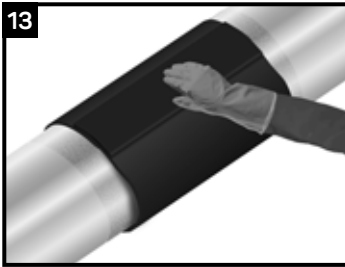
Using the wider sleeve, partially remove the release liner and gently heat the underlap approximately 150mm (6") from the edge. Depending on the TBK directional drill kit, a release liner may or may not be present.



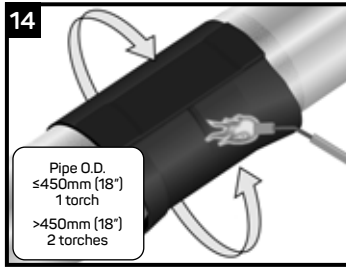
Centre the sleeve over the joint so that the sleeve overlaps between the 10 and 2 o'clock positions. Press the underlap firmly into place. Remove the remaining release liner.



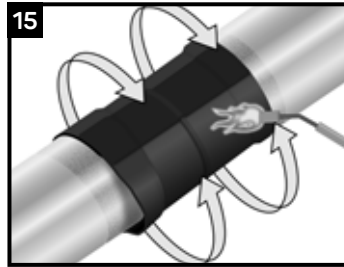
Wrap the sleeve loosely around the pipe, ensuring the appropriate overlap. Gently heat the backing of the underlap (1) and the adhesive side of the overlap (2). For TBK-80 and TBK-PE, heat the adhesive side of the closure until it becomes shiny.



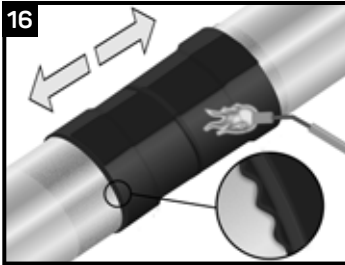
Press the closure firmly into place. Gently heat the closure and pat it down with a gloved hand. Repeating this procedure, move from one side to the other. Smooth any wrinkles by gently working them outward from the centre of the closure with a roller.



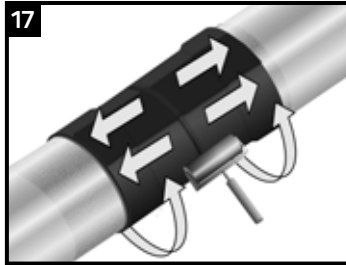
Using the appropriate sized torch, begin at the centre of the sleeve and heat circumferentially around the pipe. Use broad strokes. If utilizing two torches, operators should work on opposite sides of pipe.



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.

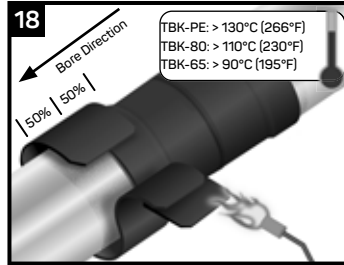


Shrinking has been completed when the adhesive begins to ooze at the sleeve edges all around the circumference. Finish shrinking the sleeve with long horizontal strokes over the entire surface to ensure a uniform bond.



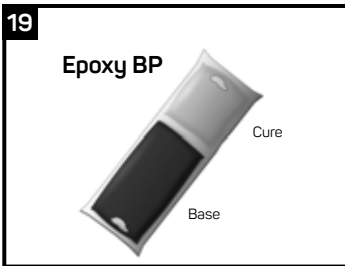
While the sleeve is still hot and soft, use a hand roller to gently roll the sleeve surface and push any trapped air up and out of the sleeve, as shown above. Continue the procedure by also firmly rolling the closure with long horizontal strokes from the weld outwards.

Sacrificial Sleeve Installation



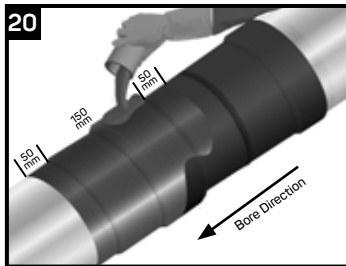
Ensure that the front 100 mm (4") of the primary sleeve and 100 mm (4") onto the coating is at the required temperature. Completely remove any release liners from the sacrificial sleeve, if present. Wrap the sacrificial sleeve so that half of the sleeve overlaps the primary sleeve and half of the sleeve 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

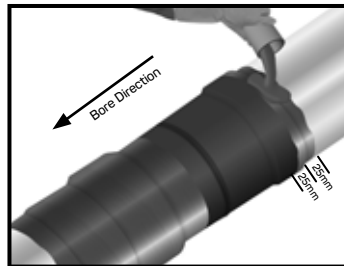


Follow the Preparation, Mixing and Application instructions provided with the supplied Canusa Epoxy Pack. For bulk quantities: mix the epoxy cure with the epoxy base (4 parts base to 1 part cure by volume). Stir for a minimum of 30 seconds to assure uniform mixture.

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 Canusa epoxy kits.

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.

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Quality Management system registered to ISO 9001

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