

HBE-OS Brush Grade

High Build Epoxy Coating for Protection of Offshore Field Joints

Kit Contents (Options A, B, and C)

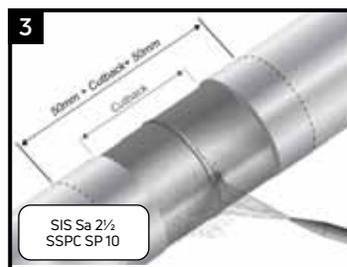


HBE-OS is a two part epoxy coating used for protection of offshore field joints. HBE-OS is supplied in kits containing pre-measured components of Part A - HBE Cure (small container or bubble pack) and Part B - HBE Base (large container). The "Standard Kit" contains the HBE components while the "Complete Field Ready Kit" also includes a stir stick, scraper and gloves. HBE-OS is also available in a 2-component 3:1 ratio cartridge. All kit styles are supplied with Installation Guides and MSDS's.

Offshore Surface Preparation



Clean exposed steel and adjacent pipe coating according to SSPC SP 1 to remove the presence of oil, grease, and other contaminants. Ensure that the pipe is at least 3°C (5°F) above the dew point before cleaning.

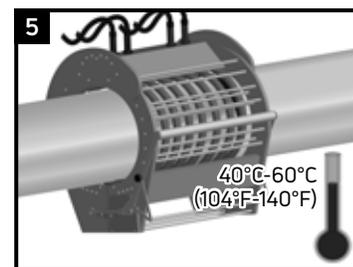


Thoroughly clean the cutback area to "near white metal" SIS Sa 2 1/2 (SSPC-SP10) or equivalent. Materials used for abrasive blasting shall produce an angular surface profile of 2.5-5 mils (64-127 µm) Lightly abrade at least 50mm (2") of the line coating on each side of cutback area.



Wipe clean with a lint-free cloth or air blast the steel and pipe coating to remove foreign contaminants. Surface must be clean and dry prior to application of HBE products.

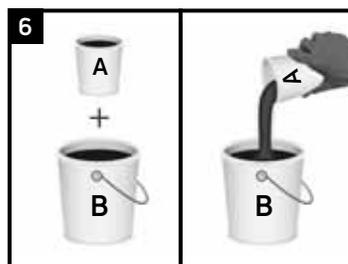
Pre-Heat



Pre-Heat the pipe area (by induction or torch or hot air gun) to temperatures of 40°C - 60°C (104°F - 140°F).

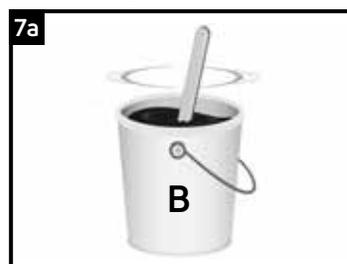
Options A and B

HBE Mixture Kits

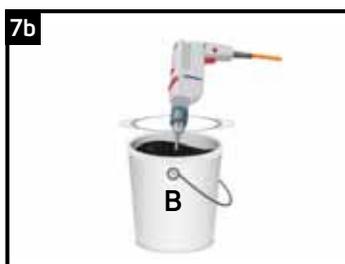


Components should be warmed to at least 20°C (68°F) prior to mixing. Pour Part A - HBE Cure (small container) into Part B - HBE Base (large container). Scrape walls and lids of both containers to ensure all product is used. When mixing, slow the mixer down at the surface of the liquid to prevent the introduction of air into the coating. Do not add solvent or other materials to the mixture.

HBE Stirring Kits



Begin mixing slowly. After initial mix has been achieved, a spatula or mixing stick should be used to remove any resin from the side of container.



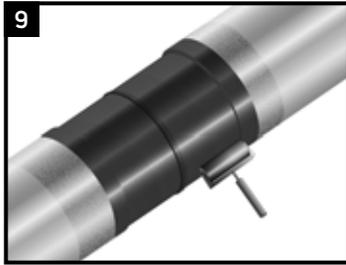
Mix at such a speed that ensures a uniform colour, but does not create a vortex in the liquid. Mix with a drill stirrer or a spatula, blending both parts to create one uniform colour with no streaks.

HBE Application



Dispense epoxy across the steel cutback and spread around the circumference of the pipe.

HBE Application



Use a brush, roller or trowel to apply HBE to the joint or application area to a specified minimum thickness. Continue by smoothly rolling epoxy over the entire circumference of pipe. Ensure that the roller remains in contact with the pipe at all times to avoid air entrapment. Dispense additional epoxy as required to meet the minimum WFT around the entire circumference. Cover at least 50mm (2") of any adjacent pipeline coating. Coating should only be applied at temperatures above 10°C (50°F) and when the pipe temperature is 3°C (5°F) above the dew point.

Option C

HBE Cartridge



Canusa's HBE is available in a 2-component cartridge. The cartridge fits into a universal 2-component cartridge dispenser that is available from Canusa.

Dispensing and Mixing



To dispense, unscrew the cap, remove the two small plugs in each side of the cartridge and replace cap. Squeeze the trigger of the cartridge dispenser and dispense a desired amount of material into a mixing cup. The cartridge dispenser will automatically dispense the correct ratio of base and 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. 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.

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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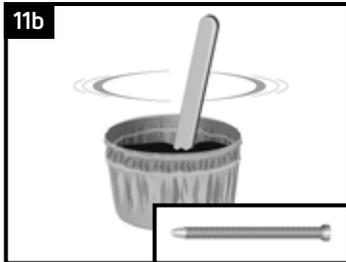
Middle East

SFL Canusa Middle East PPTS LLC
KLP5, Block B, Unit B-01,
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Quality Management system registered to ISO 9001

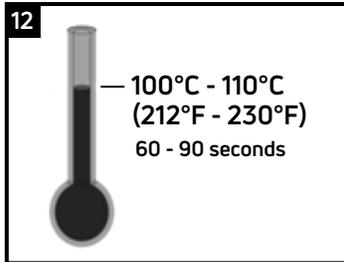
Canusa warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the installation guide when used in compliance with Canusa's written instructions. Since many installation factors are beyond our control, the user shall determine the suitability 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

Part No. 99060-263
IG_HBE-OS_rev014



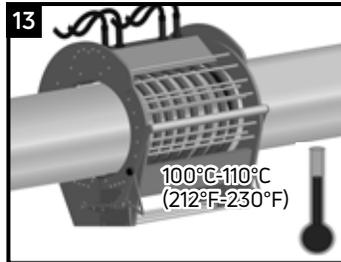
With a clean stir stick mix thoroughly to create one uniform colour with no streaks. Alternately for larger projects, a static mixer nozzle (available from Canusa) allows for direct application onto pipe.

HBE Curing



Induction generator power should be calibrated such that steel temperature rises from 40°C to 100-110°C in 60-90 seconds.

HBE Curing



Carefully move the induction coil into place ensuring that epoxy is not disturbed. Heat the joint area to 100 - 110 C (212 - 230 F), by checking the temperature on the adjacent coating. Shut the coil off for 60 seconds and hold temperature. After holding temperature for a minimum 60 seconds, continue to heat the joint area to 140 - 150 C (284 F - 302 F). **Ensure generator/coil settings are as per recommended guidelines.**

Useful Application Information

The ideal mixing and application temperature is between 20°C (68°F) and 40°C (105°F).

Force Cured Epoxy should be left to set for a minimum of 60 seconds prior to infilling joint to ensure adequate hardness.

Avoid prolonged storage at temperatures below 5°C (41°F) or above 40°C (104°F). Do not freeze Canusa HBE products.