

HBE-95 - Brush Grade

Brush-applied High Build Epoxy

Canusa-CPS is a leading manufacturer of specialty pipeline coatings which, for over 30 years, have been used for sealing and corrosion protection of pipeline joints and other substrates. Canusa high performance products are manufactured to the highest quality standards and are available in a number of configurations to accommodate your specific project applications.

Product Description

HBE-95 is a "state of the art" surface coating designed to solve specific industry problems by combining the unique features of epoxy and proprietary cure technologies.

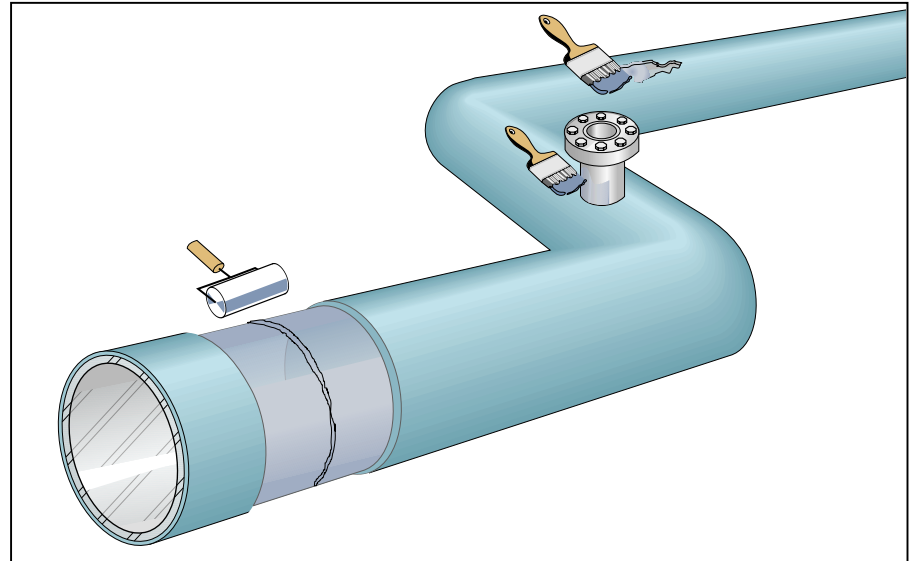
The HBE-95 is a 100% solids, two component epoxy coating system which has been specifically designed as an exterior coating applied to bare steel for protection of pipe joint girth welds, valves and fittings, or as a touch-up material or rehabilitation system for mainline coatings.

Typical Uses

Protective coating for pipelines in buried or immersed applications. Used as a direct-to-metal corrosion and abrasion-resistant coating and as a rehab coating on steel pipelines and at girth welds. Also used as touch-up material for mainline coatings. Excellent coating for pipeline valves, fittings, and bends.

Features & Benefits

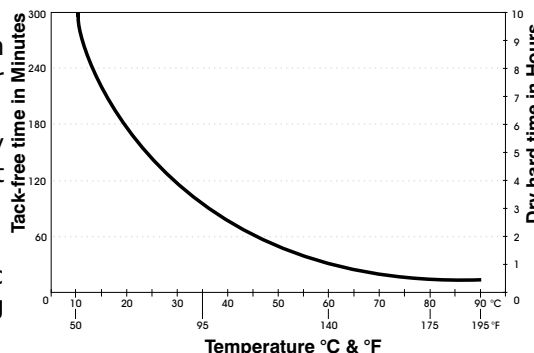
- High Build in a single coat
- Sets and Cures over a broad temperature range
- Environmentally safe
- 100% solids, Zero V.O.C.
- Excellent adhesion to grit blasted steel - an ideal mainline corrosion coating for pipelines
- Superior adhesion to Fusion Bonded Epoxy (FBE) Coatings - ideal coating for joint protection and repair of FBE coated pipe.
- Excellent chemical & abrasion resistance.
- Outstanding resistance to cathodic disbonding up to 95°C (203°F) operating temperatures.
- Easily applied with brush or roller.



Technical Data

- **Coating Description**
Epoxy
- **Conversion to Solids**
100%
- **Theoretical Coverage**
425 mil-sq. ft./litre
(1605 mil-sq. ft./US gallon)
(1.0 mm-m²/litre)
- **Typical Thickness**
>20 mils
- **Flashpoint (T.C.C.)**
>95°C (200°F)
- **Mixing Ratio (By Volume)**
3 Parts Base : 1 Part Cure

Typical Cure Schedule for HBE-95 - Brush Grade



Applications

- Oil & Gas
- Offshore Pipelines
- Water Pipelines
- Repair & Rehab
- Abrasion Coating
- Corrosion Coating
- Girth-Weld Joints
- Fittings & Bends

Configurations

- Brush Application
- Sleeve Compatible

Temperature Range

- Up to 95°C (203°F)

HBE-95 - Brush Grade

Corrosion and Abrasion-Resistant High Build Epoxy Coating

Typical Product Properties

Cured Coating Performance Properties	Test Standard	Unit	Typical Values
Hardness	ASTM D2240	Shore D	> 85
Adhesion to steel*	ASTM D4541	psi	>2000 psi
Adhesion to FBE	ASTM D4541	psi	>2000 psi
Cathodic Disbondment Rating			
28 day 23C	CSA Z245.20	mm, radius	<3
28 day 80C	CSA Z245.20	mm, radius	<8
28 day 95C	CSA Z245.20	mm, radius	<8
Impact			
at -30C	CSA Z245.20	Joules (in-lb)	>3.0 (26.5)
at 25C	CSA Z245.20	Joules (in-lb)	>3.0 (26.5)
Hot Water Immersion			
28 days 75C	CSA Z245.20	1 to 5	1, excellent
28 day 95C	CSA Z245.20	1 to 5	1, excellent
Water Absorption	ASTM D149	%	<0.1
Dielectric Strength	ASTM D543	Volts/micron (volts/mil)	> 16 (400)
Chemical Resistance		various solutions	excellent

* (SSPC-SP10; 2-4 mil profile)

Surface Preparation, Clean-up, Storage & Safety

Surface Preparation	Clean-up, Storage & Safety
<p>Direct-to-steel:</p> <ul style="list-style-type: none"> Remove all visible deposits of oil, grease and other contaminants by solvent washing in accordance with SSPC SP1. Abrasive blast surface to Near-White (SSPC-SP10; NACE 2; Sa2½) or better, with a 2-4 mil blast profile. <p>On cured pipe coating:</p> <ul style="list-style-type: none"> Remove gloss on surface by light abrasive blasting or power tool. All surfaces to be coated must be completely dry, free of moisture, soil, dust and grit at the time the coating is applied. All weld splatter must be removed from the surface and rough welds must be ground smooth prior to coating. 	<p>Clean-up</p> <ul style="list-style-type: none"> For clean-up use xylene, MEK or mixture. <p>Storage</p> <ul style="list-style-type: none"> Products must be shipped and stored at temperatures between 5°C (40°F) and 40°C (105°F). DO NOT FREEZE. Shelf life of 12 months when stored as specified. <p>Safety</p> <ul style="list-style-type: none"> Material Safety Data Sheet and product labels contain detailed health, hygiene and safety information. This coating is intended for industrial use by properly trained professional applicators. Do not apply without adequate air exchange and ventilation in enclosed areas. Use fresh air respirator in confined areas. Wear protective clothing when spraying the coating. Breathing fumes or contact with skin can cause respiratory and other allergic reactions in some people.

Mixing & Application Instructions

Application Instructions
<ul style="list-style-type: none"> For detailed application instructions please refer to HBE-95 Installation Guide. Materials must be allowed to warm to at least 20°C (68°F) prior to mixing. Pre-mix Base (more viscous component) slowly with a variable speed drill gun fitted with an appropriate mixing impeller. Pour pre-measured Cure into pre-measured Base. At temperatures between 20°C (68°F) and 40°C (105°F). Mix for one (1) minute blend both parts to create one uniform colour with no streaks: Begin mixing slowly. Caution: Mix at a speed that ensures a uniform mix, but does not create a vortex in the liquid. Slow mixer down at surface of the liquid to prevent introduction of air into the coating. Pot-life is approximately 15 minutes at 20°C (68°F) and shortens with increased temperatures. HBE-95 must be applied to clean dry surface only. Ambient conditions for successful application include: relative humidity less than 85%; and the substrate temperature greater than 3°C (5°F) above the dew point. The acceptable substrate temperature range for application of HBE-95 is 10°C (50°F) to 100°C (212°F). Applying onto warm substrate greater than 38°C (100°F) enhances coating adhesion. Formulated to mixing ratio of 3 parts Base to one part Cure by volume. If additional coats are required, they shall be applied while the preceding coat is still tacky (no tie coat needed). The maximum over-coating interval shall not exceed two (2) hours at 25°C (77°F) without roughening the surface. If recoating interval has been exceeded, surface must be blast roughened prior to application of topcoat. A minimum of four (4) hours curing above 20°C (68°F) is required prior to handling. Handling time may be longer at lower temperatures. Apply thoroughly mixed HBE-95 by brush, roller or trowel. When coating pipe, remove application tools on the upstroke to prevent pulling material down and off the pipe bottom.

How to Order:

	Product Designation	Package Contents
Kits	HBE-95-BG Kit-0.5	375mL of HBE-95 Base, 125mL of HBE-95-BG Cure
	HBE-95-BG Kit-1.0	750mL of HBE-95 Base, 250mL of HBE-95-BG Cure
	HBE-95-BG Kit-1.5	1125mL of HBE-95 Base, 375mL of HBE-95-BG Cure
Access	HBE-95-BG Application Kit	1 pair of rubber gloves, mixing sticks, application scraper

* Special pre-measured quantities will be considered for larger projects. Please consult your Canusa representative.



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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

Printed on recycled paper. Recyclable. PDS-HBE-95-BG-rev012

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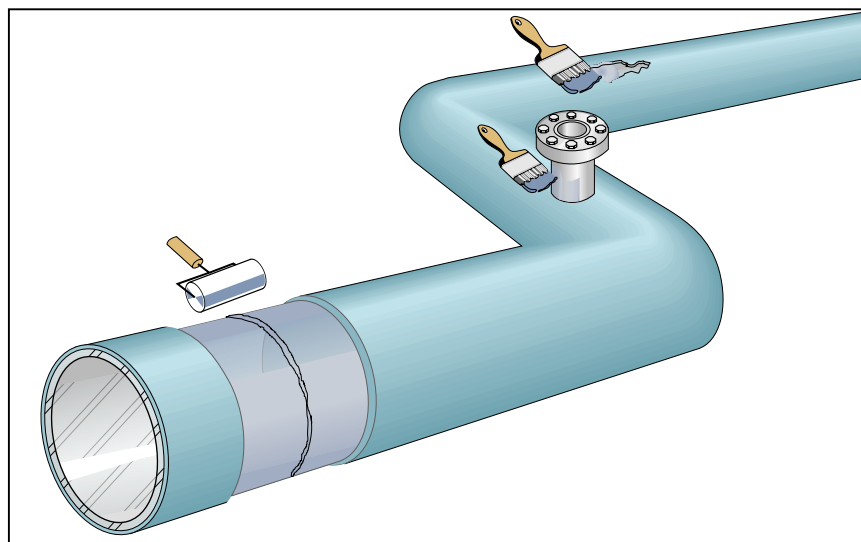
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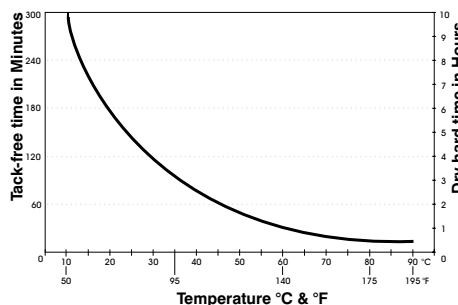
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Offshore Pipelines



Water Pipelines



Repair & Rehab



Abrasion Coating



Corrosion Coating



Girth-Weld Joints



Fittings & Bends

Configurations



Brush Application



Sleeve Compatible

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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