

# Liquid Epoxy Type E

## Force-cure epoxy for superior 3-layer corrosion protection

Canusa Liquid Epoxy Type E is a force cured, two part epoxy used as the primary layer with Canusa 3-layer systems, such as GTS-PE and GTS-65. Usage of Canusa's proven method of force curing enables the installer to "pre-inspect" the joint prior to sleeve application. This provides the assurance that the pipe is fully protected and it will not be displaced and exposed to corrosive contaminants during the aligning and shrinking stages of the sleeve installation. It is composed of a specially formulated 100% solids epoxy system, which does not use any volatile solvents. This ensures that the thickness of the epoxy layer does not change as it cures.

### Coating Continuity

- The Liquid Epoxy Type E layer offers equivalent corrosion protection to the FBE primary layer in 3 layer polyethylene and 3 layer polypropylene mainline coated pipelines

### Improved Cathodic Disbondment Resistance

- Liquid Epoxy Type E will improve the Cathodic Disbondment resistance results for hotmelt type adhesives when compared against bare steel substrate.

### Superior Force Cured Epoxy

- Using Canusa's proven method of force curing the epoxy to the steel allows the installer to "pre-inspect" the joint prior to sleeve installation.

### Saves Time

- The improved chemical bonding that is achieved from the adhesive to the force cured epoxy layer allows for reduced sleeve installation times due to lower heat requirements.



### Applications



Oil & Gas



Offshore Pipelines



Repair & Rehab



High Temperature

# Liquid Epoxy Type E

## Force-cure epoxy for superior 3-layer corrosion protection

### E Primer Performance Characteristics

Mixing Ratio	4:1 (by volume) 6.1:1 (by weight)
Percent Solids	100% (by volume) 100% (by weight)
Specific Gravity	1.57 ± 0.05 (Base) 1.04 ± 0.05 (Cure)
Viscosity	Base: 14,000 +/- 1,400 cps (@ 60°C #7 Spindle at 10 rpm) Cure: 1,800 +/- 160 cps (@ 23°C #2 Spindle at 20 rpm)
Typical Coating Thickness	4-6 mils
Number of coats	One
Pot Life	20 minutes @ 23°C. Pot life decreases with temperature.
Shelf Life	3 years @ 23°C, out of direct sunlight. Shelf life decreases with temperature.
Minimum Curing Temperature	10°C

### Calculation of Liquid Epoxy Type E Quantity Required

Bare Steel Surface Area (square meter)	$Circumference (m) * Cutback length (mm) / 1000$
Required Volume of Liquid Epoxy Type E (Liter)	$Bare Steel Surface Area * Thickness (microns) / 1000000 * [(1 + Wastage Factor^1 / 100) * 1000]$
Total Required Number of Kits	$Required Volume of Liquid Epoxy Type E / 0.170$

### Typical Quantity of 170 ml Liquid Epoxy Type E kits required by Pipe Size<sup>2</sup>

4.5" to 22"	One
24" to 42"	Two
44" to 60"	Three

<sup>1</sup> Typical Wastage Factor: 25-50%

<sup>2</sup> Based on a 300 mm wide cut back with 6 mils average thickness and typical wastage

Epoxy Consumption is based on the following variables and will differ between applications:

- Applicator Type (roller or sponge)
- Surface Profile
- Applicator Skill
- Pipeline Layout

### Safety

Handle with care. Before and during use, observe all safety labels on packaging containers, consult with Canusa-CPS Material Safety Data Sheets and abide by all local or national safety regulations.

Since 1967, Canusa-CPS has been a leading developer and manufacturer of specialty pipeline coatings for the sealing and corrosion protection of pipeline joints and other substrates. Canusa-CPS high performance products are manufactured to the highest quality standards and are available in a number of configurations to accommodate many specific project applications.

The product information shown here is intended as a guide for standard products.

Consult your Canusa representative for specific projects or unique applications.



### Canusa-CPS A division of ShawCor Ltd.

#### Head Office

25 Bethridge Rd.  
Toronto, ON M9W 1M7 Canada  
Tel: +1 416 743 7111  
Fax: +1 416 743 5927

#### Canada

Suite 3200, 450 - 1st Street S.W.  
Calgary, AB T2P 5H1 Canada  
Tel: +1 403 218 8207  
Fax: +1 403 264 3649

#### Americas

2408 Timberloch Place, Building C-8  
The Woodlands, TX 77380 USA  
Tel: +1 281 367 8866  
Fax: +1 281 367 4304

#### Europe & Middle East

Unit 3, Sterling Park,  
Gatwick Road, Crawley, West Sussex  
RH10 9QT United Kingdom  
Tel: +44 1293 541254  
Fax: +44 1293 541777

#### Asia-Pacific

101 Thomson Road,  
#11-03 United Square  
307591 Singapore  
Tel: +65 6749 8918  
Fax: +65 6749 8919

### Canusa-CPS is registered to ISO 9001:2008

Canusa warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the product data sheet 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 data sheet is to be used as a guide and is subject to change without notice. This data sheet supersedes all previous data sheets on this product. E&OE

PDS\_Epoxy(E)\_rev018