PPG FE-100

DESCRIPTION

100% solids, two-component bisphenol A epoxy designed for hand-application to pre-cast concrete

PRINCIPAL CHARACTERISTICS

- 100% solids
- Excellent adhesion to concrete
- Provides good resistance to sulfuric acid, sodium hydroxide, detergent, bleach, gasoline and other common wastewater contaminants
- TYPICAL USES:
- Pre-cast sanitary and storm manholes and box culverts
- Pre-cast concrete piping
- Concrete secondary containment structures

COLOR AND GLOSS LEVEL

- Beige
- Semi-gloss

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Volume solids	100 ± 2%
Recommended dry film thickness	60.0 - 150.0 mils (1500 - 3750 µm) per coat
Theoretical spreading rate	26 ft^2/US gal for 60.0 mils (0.6 m^2/l for 1524 µm)
Dry to touch	6 hours
Dry to handle	8 hours
Overcoating Interval	Minimum: Coating should no longer leave residue when touched with a gloved finger Maximum: 4 hours
Curing time	24 hours
Shelf life	Part A: at least 12 months when stored cool and dry Part B: at least 12 months when stored cool and dry

Notes:

- Curing time reflects ready for service time
- If overcoat time is exceeded, abrade and clean surface before recoating. Then treat with acetone, MEK, or PPG TACKCOAT as a reactivating adhesion promoter.
- Material should be stored in dry conditions, out of direct sunlight, and in unopened original factory containers, at temperatures above 60°F (16°C) and below 95°F (35°C)
- See ADDITIONAL DATA – Spreading rate and film thickness
- See ADDITIONAL DATA - Additional drying/curing details

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RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Substrate temperature and application conditions

- Substrate temperature during application should be between 65°F (18°C) and 120°F (49°C)
- Ambient temperature should not exceed 120°F (49°C)

Concrete / Masonry

- All surfaces must be sound, dry, clean, free of oil, grease, dirt, mildew, curing compounds, loose and flaking paint, and other foreign substances
- Abrade surface to achieve a surface profile equivalent to CSP 3 to CSP 5 in accordance with ICRI 310.2R-2013
- Prepare in accordance with SSPC SP-13 guidelines
- Abrasive blasting, shot blasting, high-pressure water cleaning, water jetting or a combination of methods may be used

SYSTEM SPECIFICATION

- Primers for Concrete: PPG VF 30 Primer
- Primers for Carbon Steel: PPG AQUATAPOXY® 190 Primer*, PPG AQUATAPOXY® 90 Epoxy Coating*
- Primers for non-ferrous metals: PPG AQUATAPOXY® 190 Primer*
- Recommended DFT for New/Smooth Concrete: 60-100 mils (1.5-2.5 mm)
- Recommended DFT for Rough Concrete: 80-150 mils (2.0-3.8 mm)
- Recommended DFT for Resurfaced Concrete: 60-100 mils (1.5-2.5 mm)
- Recommended DFT for Masonry/Brick: 60-100 mils (1.5-2.5 mm)
- Recommended DFT for Resurfaced Masonry/Brick: 60-100 mils (1.5-2.5 mm)

Note:

- *Do not use this primer if immersion temperatures will exceed 140°F (60°C)

INSTRUCTIONS FOR USE

Mixing ratio by volume: Part A to Part B 3:2

- Carefully open each pre-packaged bag and add to mixing pail
- Mix Part A and Part B together using a Jiffy-type mixer until thoroughly mixed
- The temperature of the unmixed material should not be above 150°F (66°C)

Note:

- If lower viscosity is needed, heat unmixed material by placing the containers in hot tap water until the desired flow properties are obtained

Application

- Apply by masonry brush or steel trowel
- Product working time is 45 minutes at 72°F (22°C)
- No thinner should be added

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Pot life

45 minutes at 72°F (22°C)

Cleaning solvent

- MEK, acetone, or xylene

ADDITIONAL DATA

Additional drying/curing details	
Characteristic	**Value**
Gel time at 68°F (20°C)	6-7 hours

Physical data of cured material	
Characteristic	**Value**
Tensile Strength (ASTM D638)	2,560 psi (17.7 MPa)
Tensile Elongation (ASTM D638)	0.31%
Compressive Strength (ASTM D695)	6,170 psi (42.5 MPa)
Flexural Strength (ASTM D790)	4,580 psi (31.6 MPa)
Hardness, Shore D (ASTM D2240)	80
Adhesion to Steel (ASTM D4541)	>2,500 psi (>17.2 MPa)
Adhesion to Concrete (ASTM D7234)	To substrate failure

Note:

- The value ranges stated in this Technical Data Sheet are based on system processing under laboratory conditions. Equipment configurations and/or field application conditions may produce variances in final system values.

Spreading rate and film thickness	
DFT	**Theoretical spreading rate**
60.0 mils (1524 µm)	27 ft^2/US gal (0.7 m^2/l)
80.0 mils (2032 µm)	20 ft^2/US gal (0.5 m^2/l)
100.0 mils (2540 µm)	16 ft^2/US gal (0.4 m^2/l)
150.0 mils (3810 µm)	11 ft^2/US gal (0.3 m^2/l)

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DISCLAIMER

- PPG Protective & Marine Coatings does not accept any responsibility or liability for any odor, taste or contamination imparted to the drinking water from the coatings or products retained in the coating

SAFETY PRECAUTIONS

- Read all label and Safety Data Sheet (SDS) information prior to use

WORLDWIDE AVAILABILITY

It is always the aim of PPG Protective & Marine Coatings to supply the same product on a worldwide basis. However, slight modification of the product is sometimes necessary to comply with local or national rules/circumstances. Under these circumstances an alternative product data sheet is used.

REFERENCES

- Information sheet | Explanation of product data sheets

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