PPG Bridge Deck Membrane

formerly sold as Bridge Preservation® Bridge Deck Membrane

DESCRIPTION

Rapid setting, 100% solids, two-component polyurea waterproof membrane used for protection on rail and DOT structures.

PRINCIPAL CHARACTERISTICS

- Fast-curing
- Can be applied and cures at temperatures down to -20°F (-29°C).
- 100% solids
- Can be applied to horizontal, vertical and overhead surfaces without sagging
- Provides a continuous, seamless waterproofing membrane.
- Can be used on irregular surfaces.
- Can accept asphalt overlays within one hour.
- Can accept ballast within one hour.
- Passes ASTM C1305 for 1/8" crack bridging at 80 mils.(2 mm).
- Meets AREMA Chapter 29, Part 2 for Cold Liquid-Applied Elastomeric Membranes.
- TYPICAL USES:
- Bridges and elevated deck structures.

COLOR AND GLOSS LEVEL

- Orange or grey

Note:

- Color changes can occur under UV-exposure without negative impact on the product performance

BASIC DATA AT 72°F (22°C)

Data for mixed product	
Number of components	Two
Volume solids	100 ± 2%
VOC (Supplied)	EPA Method 24: 0.0 lb/US gal (0.0 g/l)
Dry to touch	30 seconds
Dry to walk on	1 hour
Curing time	1 hour
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:

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- Curing time reflects ready for service time
- Material should be stored in dry conditions, out of direct sunlight, in unopened original factory containers, at temperatures above 55°F (13°C) and below 95°F (35°C).
- See ADDITIONAL DATA - Drying/Curing details for gel time and tack-free time
- See ADDITIONAL DATA – Spreading rate and film thickness
- See ADDITIONAL DATA – Overcoating intervals

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- Surface must be clean, uniform, sound, and free from contamination (such as oil, grease, rust, scale, or deposits)
- Ambient temperature during application and curing should be at least -20°F (-29°C)

Concrete

- Repair spalls and other defects with approved patching material.
- Prepare in accordance with SSPC-SP13 guidelines to achieve a surface profile equivalent to CSP 3 to CSP 5 in accordance with ICRI 310.2R-2013
- For concrete surfaces at or below 32°F (0°C), additional preparation and/or testing may be required to ensure proper adhesion. Contact PPG for further information.

Steel (non-immersion service)

- Abrasive blast with an angular abrasive to a cleanliness of SSPC-SP10 or higher. Achieve a surface profile of 3.0 – 5.0 mils (76 – 127 µm) as measured using a Surface Profile Gage.

INSTRUCTIONS FOR USE

- Installation requires heated plural component set-up with direct impingement application equipment that is capable of maintaining 2,000 psi (14 MPa) dynamic spray pressure
- A and B liquid components shall be a minimum of 70°F (21°C) prior to use
- Regard PPG specifications for Bridge Deck Membrane for detailed perparation and installation procedures

Mixing ratio by volume: 1:1 (Part A to Part B)

- Part B component must be thoroughly agitated prior to use
- Mix Part B using three-tier, collapsible blade power mixer through the center bung hole
- Mixer diameter should be 1/3 of the diameter of the container
- Pre-mix Part B component for at least 30 minutes. When properly pre-mixed, material with have a uniform color with no dark or light spots.

Application

- Apply in a uniform manner to desired thickness
- Application thickness is determined by spray gun configuration and speed of application
- Lower output configurations are recommended for vertical and overhead appications to avoid runs, drips, and sags.

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Airless spray – Plural component

- 1 : 1 Heated Plural Component Spray
- Material requires heated plural component spray set-up with impingement gun
- Heated hoses are required
- Material supply capacity should be 4 times the material output of the selected spray gun configuration
- Processing equipment should be capable of maintaining set temperatures and pressure at rest and during operation
- Heated hose temperature: 160 (71°C)
- Part A should be maintained at temperature of 160°F (71°C) - Part B should be maintained at temperature of 160°F (71°C)

Recommended thinner

Do not thin

Note:

- Contact your PPG technical services representative for equipment and set-up recommendations

ADDITIONAL DATA

Additional drying/curing details	
Characteristic	**Value**
Gel time at 72°F (22°C)	10 seconds
Tack free time at 72°F (22°C)	30 seconds

Physical data of cured material	
Characteristic	**Value**
Tensile Strength (ASTM D638)	>2,000 psi (>13.8 MPa)
Tensile Elongation (ASTM D638)	250%
Tear Strength (Die C, ASTM D624)	>300 pli
Hardness, Shore D (ASTM D2240)	>40
Taber Abrasion (ASTM D4060, H-18 wheel, 1 kg load, 1,000 cycles)	<250
Adhesion to Concrete (ASTM D7234)	>150 psi (>1.0 MPa)
Adhesion to Steel (ASTM D4541)	>300 psi (>2.0 MPa)
Resistance to penetration (ASTM D1883)	Pass
North American Ballast Impact Test (9.2 - 28.1 kips, 2 million cycles)	Pass
Low Temperature Crack Bridging: 80 mils – 125 mills (2.0	Pass after 40 Cycles

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Physical data of cured material	
- 3.2 mm) Opening @ 15°F (-9.4°C)	

Notes:

- The value ranges stated in this Product Data Sheet are based on system processing under laboratory conditions. These are typical values and should not be considered product specifications for a specific field application. Equipment configurations and/or field application conditions may produce variances in final system values.
- Concrete bond strength is highly dependent on the age and condition of the concrete substrate. Actual field conditions of concrete substrate may result in lower values. Refer to contract document requirements and/or PPG's published documentation for additional information.

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)

Overcoating interval		
Overcoating with...	**Interval**	**72°F (22°C)**
itself	Minimum	10 seconds
	Maximum	24 hours
Non-solvent based coatings	Minimum	30 minutes
	Maximum	24 hours

Notes:

- When overcoating with itself, product can be overcoated as soon as it has gelled or when it no longer leaves residue with touched with a gloved finger.
- If overcoat time is exceeded, ensure that surface is clean, dry and free from all deleterious material. Then treat with PPG VERSAFLEX® 960 surface activator as a reactivating adhesion promoter

DISCLAIMER

- For industrial or professional use only
- This product is specifically suitable for use on the substrates mentioned in this document. For application on any other substrates, please always contact your PPG representative for specific instructions and in order to make sure that the product performance can be safeguarded.

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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

WARRANTY

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