PPG AMERLOCK® 2

DESCRIPTION

Two-component, high solids epoxy coating

PRINCIPAL CHARACTERISTICS

- Low-temperature curing down to 0°C (32°F)
- High performance self priming universal epoxy
- High solids, low VOC
- Surface tolerant and abrasion resistant
- Compatible with prepared, damp surfaces
- Good adhesion on most existing coatings
- Good resistance to splash and spillage of chemicals
- Meets NSF Standard 61 for tanks, pipes, valves and fittings (US manufacturing only)
- Proven coating as a bulk rail lining and DTM exterior coating

COLOR AND GLOSS LEVEL

- Standard primer colors and custom colors
- Semi-gloss

Note:

- Epoxy coatings will chalk and fade with exposure to sunlight. Light colors are prone to ambering to some extent. Note that product tinted to custom colors are not recommended for immersion service. Only use factory grind batches for immersion

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.4 kg/l (11.7 lb/US gal)
Volume solids	85 ± 2%
VOC (Supplied)	Directive 2010/75/EU, SED: max. 114.0 g/kg max. 163.0 g/l (approx. 1.4 lb/US gal) EPA Method 24: 1.5 lb/US gal (180.0 g/l)
Temperature resistance (Continuous)	To 120°C (250°F)
Temperature resistance (Intermittent)	To 175°C (350°F)
Recommended dry film thickness	100 - 200 µm (4.0 - 8.0 mils)
Theoretical spreading rate	8.5 m^2/l for 100 µm (341 ft^2/US gal for 4.0 mils)
Dry to touch	6 hours
Overcoating Interval	Minimum: 6 hours
Shelf life	Base: at least 36 months when stored cool and dry Hardener: at least 24 months when stored cool and dry

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Notes:

- See ADDITIONAL DATA – Spreading rate and film thickness
- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time
- For compliance with regulations which require VOC less than 100 g/L, AMERLOCK 2 VOC can be specified interchangeably
- AMERLOCK 2 VOC is available only in US and Canada
- Intermittent temperature resistance should be less than 5% of the time, and maximum 24 hours
- Temperature resistance is in atmospheric condition. Please contact your PPG representative for immersion condition.

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- Coating performance is proportional to the degree of surface preparation. Remove all loose paint, mill scale, and rust. The surface to be coated must be dimensionally stable, dry, clean and free of grease, oil, and other foreign materials. When proper abrasive blast surface preparation is not practical, surfaces should be chipped clean and wire brushed to bare, clean material.

Carbon steel

- For immersion service: steel; blast cleaned to ISO Sa2½ (SSPC SP10)
- For atmospheric service, abrasive blast to ISO Sa2½ or minimum SSPC SP6, power tool cleaned to ISO St3 (SSPC SP3) or hand tool cleaned to ISO St2 (SSPC SP2) or ultra high pressure water jet to SSPC SP WJ-2(L) / NACE WJ-2(L)

Concrete / Masonry

- New concrete must cure a minimum of 28 days prior to application of this product
- Remove grease, oil and other penetrating contaminants according to ASTM D4258
- Surface profile shall be CSP 2-3 or greater, meeting ICRI standard guideline #03732 for coating concrete, producing a profile equal to 80-grit sandpaper or coarser. Prepare surface by mechanical means to achieve this desired profile.
- Fill voids as necessary with AMERCOAT 114 A epoxy filler
- Slabs on grade should have a maximum moisture content of 3 lbs / 1,000 ft^2/24 hours when measured by calcium chloride test.
- Moisture content should not exceed 4% (ASTM D4944, Calcuim Carbide Gas method)

Galvanized steel

- Remove oil or soap film with detergent or emulsion cleaner
- Lightly abrasive blast with a fine abrasive in accordance with SSPC SP-16 guidelines to achieve a profile of 40 - 75 µm (1.5 - 3.0 mils). When light abrasive blasting is not possible, galvanizing can be treated with a suitable zinc phosphate conversion coating
- Galvanizing that has had at least 12 months of exterior weathering may be coated after power washing to remove all contaminants and white rust

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Non-ferrous metals and stainless steel

- Remove all rust, dirt, moisture, grease or other contaminants from the surface
- Lightly abrasive blast with a fine abrasive in accordance with SSPC-SP16 guidelines to achieve a profile of 40 - 100 µm (1.5 - 4.0 mils)

Aged coatings and repairs

- Aged suitable coating must be dry and free from any contamination
- For single-pack coatings, extra precautions are necessary

Substrate temperature

- Substrate temperature during application and curing should be between 0°C (32°F) and 50°C (122°F)
- Substrate temperature during application and curing should be at least 3°C (5°F) above dew point

SYSTEM SPECIFICATION

- Primers: Direct to substrate; DIMETCOTE Series, AMERCOAT 68 Series, AMERLOCK 2 / 400 Series, SIGMAZINC Series, AMERCOAT Epoxies and SIGMA Epoxies
- Topcoats: AMERCOAT 450 Series, SIGMADUR Series, SIGMACOVER Epoxies, AMERCOAT Epoxies, AMERSHIELD, PSX Topcoat Series, PITTHANE ULTRA Series and DURETHANE DTM

Note:

- Please contact your PPG representative if using an alternate primer

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 1:1

- The paint should be stirred well before use, preferably by means of a mechanical mixer, to ensure homogeneity
- Add hardener to base and continue stirring until homogeneous

Table of Induction time

Mixed product induction time	
Mixed product temperature	**Induction time**
0°C (32°F)	45 minutes
10°C (50°F)	30 minutes
15°C (59°F)	20 minutes
20°C (68°F)	10 minutes
Above 23°C (73°F)	None

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Pot life

2 hours at 10°C (50°F)

Note:

- See ADDITIONAL DATA – Pot life

Air spray

Recommended thinner

THINNER 91-92 or THINNER 21-06 for Global, THINNER 91-34 (AMERCOAT 8) for NSF/ANSI 61, THINNER 91-82 (AMERCOAT T10) for NON NSF/ANSI 61 and \< 90°F (32°C), THINNER 21-25 (AMERCOAT 101) for NON NSF/ANSI 61 and > 90°F (32°C)

Volume of thinner

0 - 10%, depending on required thickness and application conditions

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Airless spray

Recommended thinner

THINNER 91-92 or THINNER 21-06 for Global, THINNER 91-34 (AMERCOAT 8) for NSF/ANSI 61, THINNER 91-82 (AMERCOAT T10) for NON NSF/ANSI 61 and \< 90°F (32°C), THINNER 21-25 (AMERCOAT 101) for NON NSF/ANSI 61 and > 90°F (32°C)

Volume of thinner

0 - 5%, depending on required thickness and application conditions

Nozzle orifice

Approx. 0.48 mm (0.019 in)

Nozzle pressure

15.0 - 18.0 MPa (approx. 150 - 180 bar; 2176 - 2611 p.s.i.)

Brush/roller

- Apply evenly using a well-loaded brush or roller
- Application by brush or roller will provide approximately 80 µm (3.1 mils) DFT in a single-coat application

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Cleaning solvent

- THINNER 90-53, THINNER 90-58 (AMERCOAT 12) or THINNER 21-06 (AMERCOAT 65)

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ADDITIONAL DATA

Spreading rate and film thickness	
DFT	**Theoretical spreading rate**
100 µm (4.0 mils)	8.5 m^2/l (341 ft^2/US gal)
125 µm (5.0 mils)	6.8 m^2/l (273 ft^2/US gal)
200 µm (8.0 mils)	4.3 m^2/l (170 ft^2/US gal)

Overcoating interval for DFT up to 200 µm (8.0 mils)					
Overcoating with...	**Interval**	**5°C (41°F)**	**10°C (50°F)**	**20°C (68°F)**	**30°C (86°F)**
itself and various two-pack epoxy coatings	Minimum Maximum	24 hours 1 month	12 hours 1 month	6 hours 1 month	3 hours 1 month
urethane and PSX	Minimum Maximum	24 hours 14 days	12 hours 14 days	6 hours 7 days	3 hours 4 days

Notes:

- Surface should be dry and free from any contamination
- If maximum recoat time has been exceeded, roughen surfaces
- Alkyd coatings and waterborne acrylic coatings should be applied after the film is dry to handle and not greater than three times dry to handle time
- Maximum recoating time is highly dependent upon actual surface temperature - not simply air temperatures. Sun-exposed or otherwise heated surface will shorten the maximum recoat window
- A detergent wash with PREP 88 or equivalent is recommended prior to application of topcoats after 30 days of exposure if chalking or contamination is present

Curing time for DFT up to 200 µm (8.0 mils)		
Substrate temperature	**Dry to handle**	**Full cure**
0°C (32°F)	38 hours	21 days
10°C (50°F)	14 hours	7 days
20°C (68°F)	5 hours	4 days
30°C (86°F)	3 hours	3 days

Note:

- Adequate ventilation must be maintained during application and curing

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Pot life (at application viscosity)	
Mixed product temperature	**Pot life**
0°C (32°F)	4 hours
10°C (50°F)	2 hours
20°C (68°F)	1 hour
30°C (86°F)	30 minutes

Product Qualifications

- Compliant with USDA Incidental Food Contact Requirements
- NFPA Class A for Flame Spread and Smoke Development
- Qualified for ANSI/NSF Standard 61 (potable water). For NSF application instructions, please visit the following website: http://www.nsf.org/certified-products-systems/
- AWWA D102-06 ICS #1, #2, #3, #5
- Nuclear Service Level 2 (ANSI N 5.12 and ASTM D5144)
- LEED's compliant for Anti-corrosive Paint category

SAFETY PRECAUTIONS

- See Safety Data Sheet and product label for complete safety and precaution requirements
- This is a solvent-borne paint and care should be taken to avoid inhalation of spray mist or vapor, as well as contact between the wet paint and exposed skin or eyes

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

PPG warrants (i) its title to the product, (ii) that the quality of the product conforms to PPG's specifications for such product in effect at the time of manufacture and (iii) that the product shall be delivered free of the rightful claim of any third person for infringement of any U.S. patent covering the product. THESE ARE THE ONLY WARRANTIES THAT PPG MAKES AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES, UNDER STATUTE OR ARISING OTHERWISE IN LAW, FROM A COURSE OF DEALING OR USAGE OF TRADE, INCLUDING WITHOUT LIMITATION, ANY OTHER WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR USE, ARE DISCLAIMED BY PPG. Any claim under this warranty must be made by Buyer to PPG in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life of the product, or one year from the date of the delivery of the product to the Buyer, whichever is earlier. Buyer's failure to notify PPG of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

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