AMERCOAT® 240

DESCRIPTION

Two-component, multi-purpose phenalkamine epoxy

PRINCIPAL CHARACTERISTICS

- Multi-purpose epoxy for industrial and marine applications
- Strong adhesion properties, suitable for wet blast cleaned substrates (damp or dry)
- Good edge-retention capacity (> 70%)
- Low VOC, extremely low HAPs
- Resistant to well designed/controlled cathodic protection
- Good resistance against chemically-polluted water
- Good abrasion resistance
- Can be applied and cured at low temperatures
- Also available with non-skid material (supplied separately) for use on deck surfaces

COLOR AND GLOSS LEVEL

- Limited color range available
- Semi-gloss

Note:

- Epoxy coatings will characteristically chalk and fade upon exposure to sunlight. Light colors are prone to ambering to some extent in interior or exterior exposures

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.5 kg/l (12.7 lb/US gal)
Volume solids	87 ± 2%
VOC (Supplied)	Directive 2010/75/EU, SED: max. 102.0 g/kg max. 153.0 g/l (approx. 1.3 lb/US gal) EPA Method 24: 145.0 g/ltr (1.2 lb/USgal)
Recommended dry film thickness	100 - 300 µm (4.0 - 12.0 mils) depending on system
Theoretical spreading rate	8.7 m^2/l for 100 µm (349 ft^2/US gal for 4.0 mils)
Dry to touch	5 hours
Overcoating Interval	Minimum: 5 hours Maximum: 6 months
Shelf life	Base: at least 36 months when stored cool and dry Hardener: at least 36 months when stored cool and dry

Notes:

AMERCOAT® 240

- See ADDITIONAL DATA – Spreading rate and film thickness
- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- Coating performance is, in general, proportional to the degree of surface preparation
- Abrasive blasting is usually the most effective and economical method. When this is impossible or impractical, coating can be applied over mechanically cleaned surfaces
- All surfaces must be clean, dry and free of all contaminants, including salt deposits. Contact PPG for maximum allowable salt contaminant levels

Carbon steel

- For atmospheric service, abrasive blast to ISO-Sa2½ or minimum SSPC SP-6, power tool cleaned to ISO-St3 (SSPC SP-3) or hand tool cleaned to ISO-St2 (SSPC SP-2) or ultra high pressure water jet to SSPC SP WJ-2(L) / NACE WJ-2(L)
- For immersion service: steel; blast cleaned to ISO-Sa2½ (SSPC SP-10)

Concrete

- Remove grease, oil and other penetrating contaminants according to ASTM D4258
- Abrade the surface per ASTM D4259 to remove all chalk and surface glaze or laitance. Achieve surface profile - ICRI CSP 3 to 5
- Maximum recommended moisture transmission rate is 3 lbs/1,000 ft2/24 hours by moisture transmission test (ASTM F1869, calcium chloride test or by ASTM D4263, plastic sheet test)
- Alternatively, ASTM D4944 (Calcium Carbide Gas method) can be used where moisture content should not exceed 4%

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

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-SP 16 guidelines to achieve a profile of 40 - 100 µm (1.5 - 4.0 mils)

AMERCOAT® 240

IMO-MSC.215(82) requirements for water ballast tanks

- Steel; ISO 8501-3:2006 grade P2, with all edges treated to a rounded radius of minimum 2 mm (0.079 in) or subject to three pass grinding or at least equivalent process before painting
- Steel or steel with not approved zinc silicate shop primer: blast cleaned to ISO-Sa2½ (SSPC SP-10), blasting profile 30 - 75 µm (1.2 – 3.0 mils)
- Steel with approved zinc silicate shop primer; weld seams and areas of shop primer damage or break down should be blast cleaned to ISO-Sa 2½ (SSPC SP-10) blasting profile 30 – 75 µm (1.2 – 3.0 mils): [1] For shop primer with IMO type approval; no additional requirements; [2] For shop primer without IMO type approval; blast cleaned to ISO-Sa2 (SSPC SP- 6) removing at least 70% of intact shop primer, blasting profile 30 – 75 µm (1.2 – 3.0 mils)
- Dust quantity rating "1 for dust size class "3", "4" or "5", lower dust size classes to be removed if visible on the surface to be coated without magnification (ISO 8502-3:1992)
- Primed steel or previous coat must be dry and free from any contamination

Aged coatings and repairs

- Ensure the coating system is sound and well adhered
- Do not apply over thermoplastic coatings or coatings that exhibit poor solvent resistance
- A test patch is recommended to determine compatibility and adhesion
- Power tool clean the existing steel in accordance with SSPC SP-3 (atmospheric service) or SSPC SP-11 (immersion service)
- Alternately, PREP 88 may be used to prepare some existing coatings. Please refer to PREP 88 data sheet for details
- Feather the edges of tightly adhered, in-tact coatings at the perimeter of repair areas

Substrate temperature

- Substrate temperature during application and curing should be at least 3°C (5°F) above dew point
- Relative humidity during application and curing should not exceed 85%
- Substrate temperature during application should be between -7°C (20°F) and 50°C (122°F)
- Ambient temperature during application and curing should be between -7°C (20°F) and 50°C (122°F)

Notes:

- The surface should be inspected to ensure there is no ice present on the substrate in cold weather conditions
- Materials temperature must be between 10°C (50°F) to 27°C (80°F) for application

SYSTEM SPECIFICATION

- Primers: Direct to substrate, DIMETCOTE Series, AMERCOAT 68 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

AMERCOAT® 240

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 4:1

- The temperature of the mixed base and hardener should be above 10°C (50°F), otherwise extra thinner may be required to obtain application viscosity
- Adding too much thinner results in reduced sag resistance and slower cure
- Thinner should be added after mixing the components

Table of Induction time

Mixed product induction time	
Mixed product temperature	**Induction time**
10°C (50°F)	30 minutes
20°C (68°F)	15 minutes
Below 5°C (41°F)	45 minutes

Pot life

1.5 hours at 20°C (68°F)

Note:

- See ADDITIONAL DATA – Pot life

Air spray

Recommended thinner

THINNER 91-92 or THINNER 91-82 (AMERCOAT T-10)

Volume of thinner

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

Nozzle orifice

1.5 – 2.0 mm (approx. 0.060 – 0.079 in)

Nozzle pressure

0.3 - 0.4 MPa (approx. 3 - 4 bar; 44 - 58 p.s.i.)

AMERCOAT® 240

Airless spray

Recommended thinner

THINNER 91-92 or THINNER 91-82 (AMERCOAT T-10)

Volume of thinner

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

Nozzle orifice

Approx. 0.48 – 0.58 mm (0.019 – 0.023 in)

Nozzle pressure

15.0 MPa (approx. 150 bar; 2176 p.s.i.)

Note:

- In order to achieve the optimum finish and cosmetic appearance, the product may be thinned by 10%

Brush/roller

Recommended thinner

THINNER 91-92 or THINNER 91-82 (AMERCOAT T-10)

Volume of thinner

0 – 10%

Notes:

- Application by brush may show brush marking, due to the thixotropic nature of the paint and is most suitable to small areas, tight angle areas or for stripe coating or touch-up
- Spray application is recommended but when spray painting is not possible, brush or roller is an appropriate method. The coating should be applied with a suitable brush or short nap roller.

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	**Theoretical spreading rate**
100 µm (4.0 mils)	8.7 m^2/l (349 ft^2/US gal)
300 µm (12.0 mils)	2.9 m^2/l (116 ft^2/US gal)

AMERCOAT® 240

Overcoating interval for DFT up to 300 µm (12.0 mils)						
Overcoating with...	**Interval**	**-5°C (23°F)**	**0°C (32°F)**	**10°C (50°F)**	**20°C (68°F)**	**30°C (86°F)**
itself	Minimum	28 hours	14 hours	8 hours	5 hours	2 hours
	Maximum	6 months	6 months	6 months	3 months	1 months
urethane and PSX	Minimum	36 hours	24 hours	14 hours	7 hours	4 hours
	Maximum	3 months	3 months	2 months	1 month	15 days

Notes:

- If maximum recoat time has been exceeded, roughen surfaces
- Minimum recoat interval for itself is to avoid sag problem for high thickness film. It can be applied wet on wet between stripe and main coat.
- 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
- 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
- Surface should be dry and free from any contamination
- A detergent wash with PREP 88, SIGMARITE 88 or equivalent is required prior to application of topcoats after 30 days of exposure

---

Curing time for DFT up to 300 µm (12.0 mils)				
Substrate temperature	**Dry to touch**	**Dry to handle**	**Full cure**	**Service- water immersion**
-5°C (23°F)	36 hours	60 hours	21 days	21 days
0°C (32°F)	24 hours	36 hours	14 days	14 days
10°C (50°F)	10 hours	16 hours	10 days	10 days
20°C (68°F)	5 hours	10 hours	6 days	6 days
30°C (86°F)	3 hours	8 hours	3 days	3 days

Notes:

- Adequate ventilation must be maintained during application and curing
- Drying times are dependent on air and surface temperatures as well as film thickness, ventilation and relative humidity

---

AMERCOAT® 240

Pot life (at application viscosity)	
Mixed product temperature	**Pot life**
15°C (59°F)	2 hours
20°C (68°F)	1.5 hours
30°C (86°F)	40 minutes

Note:

- When thinned 10% with THINNER 91-92 or THINNER 91-82 (AMERCOAT T-10), pot life will be extended to 2.5 hours, 2 hours and 1 hour at 15, 20 and 30°C (59, 68 and 86°F) respectively

Product Qualifications

- Type approval by DNV and ABS to comply with IMO Resolution MSC.215(82) Performance Standard for Protective Coatings (PSPC) for seawater ballast tanks
- NAVSEA Mil-PRF-23236(D) Classes 5,7 and 17, Type VII, Grade C (US manufacturing only)
- NAVSEA Mil-PRF-24647 underwater hull (US manufacturing only)
- Tested by NOHC as being suitable as a lining for grain storage containers
- Meets performance requirements of Mil-PRF-4556(F) for storage of jet fuels (US manufacturing only)
- Compliant with EI 1541, Performance requirements for protective coating systems used in aviation fuel storage tanks and piping
- Meets or exceeds the performance requirements of Corps of Engineers C-200a and SSPC Paint 16

SAFETY PRECAUTIONS

- For paint and recommended thinners see INFORMATION SHEETS 1430, 1431 and relevant Material Safety Data Sheets
- 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

AMERCOAT® 240

LIMITATIONS OF LIABILITY

IN NO EVENT WILL PPG BE LIABLE UNDER ANY THEORY OF RECOVERY (WHETHER BASED ON NEGLIGENCE OF ANY KIND, STRICT LIABILITY OR TORT) FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IN ANY WAY RELATED TO, ARISING FROM, OR RESULTING FROM ANY USE MADE OF THE PRODUCT. The information in this sheet is intended for guidance only and is based upon laboratory tests that PPG believes to be reliable. PPG may modify the information contained herein at any time as a result of practical experience and continuous product development. All recommendations or suggestions relating to the use of the PPG product, whether in technical documentation, or in response to a specific inquiry, or otherwise, are based on data, which to the best of PPG's knowledge, is reliable. The product and related information is designed for users having the requisite knowledge and industrial skills in the industry and it is the end-user's responsibility to determine the suitability of the product for its own particular use and it shall be deemed that Buyer has done so, as its sole discretion and risk. PPG has no control over either the quality or condition of the substrate, or the many factors affecting the use and application of the product. Therefore, PPG does not accept any liability arising from any loss, injury or damage resulting from such use or the contents of this information (unless there are written agreements stating otherwise). Variations in the application environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results. This sheet supersedes all previous versions and it is the Buyer's responsibility to ensure that this information is current prior to using the product. Current sheets for all PPG Protective & Marine Coatings Products are maintained at www.ppgpmc.com. The English text of this sheet shall prevail over any translation thereof.