AMERCOAT® 240 / SIGMACOVER™ 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:
- See ADDITIONAL DATA – Spreading rate and film thickness
- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time

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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 containment 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
- AMERCOAT 114 A may be used as a pit filler. Check with PPG Technical Service for alternative
- 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, 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)

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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:

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

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 Topcoat Series & Durethane DTM

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 80:20 (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

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Induction time

Mixed product induction time	
Mixed product temperature	**Induction time**
20°C (68°F)	15 minutes
10°C (50°F)	30 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.)

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%

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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 thixatropic 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.

Cleaning solvent
THINNER 90-53 or THINNER 90-58

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)

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 month
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:
- 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
- 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
- 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.

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

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

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WORLDWIDE AVAILABILITY

It is always the aim of PPG Protective and 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

• CONVERSION TABLES	INFORMATION SHEET	1410
• EXPLANATION TO PRODUCT DATA SHEETS	INFORMATION SHEET	1411
• SAFETY INDICATIONS	INFORMATION SHEET	1430
• SAFETY IN CONFINED SPACES AND HEALTH SAFETY, EXPLOSION HAZARD – TOXIC HAZARD	INFORMATION SHEET	1431
• SAFE WORKING IN CONFINED SPACES	INFORMATION SHEET	1433
• DIRECTIVES FOR VENTILATION PRACTICE	INFORMATION SHEET	1434
• CLEANING OF STEEL AND REMOVAL OF RUST	INFORMATION SHEET	1490
• SPECIFICATION FOR MINERAL ABRASIVES	INFORMATION SHEET	1491
• RELATIVE HUMIDITY – SUBSTRATE TEMPERATURE – AIR TEMPERATURE	INFORMATION SHEET	1650

WARRANTY

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