

AMERLOCK® 400 C

DESCRIPTION

Two-component, high solids epoxy coating

PRINCIPAL CHARACTERISTICS

- 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
- Available in MIO or conventional pigmented grade
- Good resistance to splash and spillage of chemicals

COLOR AND GLOSS LEVEL

- Standard primer colors and custom colors
- 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	1.4 kg/l (11.7 lb/US gal)
Volume solids	85 ± 2%
VOC (Supplied)	Directive 1999/13/EC, SED: max. 114.0 g/kg max. 163.0 g/l (approx. 1.4 lb/US gal) EPA Method 24: 180.0 g/ltr (1.5 lb/USgal)
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: 16 hours See overcoating tables



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Data for mixed product

Shelf life	Base: at least 36 months when stored cool and dry Hardener: at least 36 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
- Intermittent temperature resistance should be less than 5% of the time, and maximum 24 hours

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

- Steel; blast cleaned to ISO-Sa2½, blasting profile 40 – 70 µm (1.6 – 2.8 mils) or power tool cleaned to minimum ISO-St2 for good corrosion protection
- Steel; hydrojetted to VIS WJ2/3L

Concrete / Masonry

- 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
- Alternatively, ASTM D4944 (Calcium Carbide Gas method) can be used, moisture content should not exceed 4%

Galvanized steel

- 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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Aged coatings and repairs

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

- Substrate temperature during application and curing should be between 5°C (41°F) and 50°C (122°F)
 - Substrate temperature during application and curing should be at least 3°C (5°F) above dew point
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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 and PSX 700
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INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 50:50 (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
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Induction time

None

Pot life

2 hours at 20°C (68°F)

Note: See ADDITIONAL DATA – Pot life

Air spray

Recommended thinner

THINNER 91-92

Volume of thinner

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



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Airless spray

Recommended thinner

THINNER 91-92

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

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

Cleaning solvent

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

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 125 µm (5.0 mils)					
Overcoating with...	Interval	10°C (50°F)	20°C (68°F)	30°C (86°F)	40°C (104°F)
itself and various two-pack epoxy coatings	Minimum	36 hours	16 hours	6 hours	4 hours
	Maximum	3 months	3 months	2 months	1 month
urethane and PSX	Minimum	36 hours	16 hours	6 hours	4 hours
	Maximum	1 month	1 month	14 days	7 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



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Curing time for DFT up to 125 µm (5.0 mils)

Substrate temperature	Dry to touch	Dry to handle	Full cure
10°C (50°F)	24 hours	48 hours	21 days
20°C (68°F)	6 hours	20 hours	7 days
30°C (86°F)	3 hours	12 hours	4 days
40°C (104°F)	1 hour	8 hours	3 days

Note: Adequate ventilation must be maintained during application and curing (please refer to INFORMATION SHEETS 1433 and 1434)

Pot life (at application viscosity)

Mixed product temperature	Pot life
10°C (50°F)	3 hours
21°C (70°F)	2 hours
32°C (90°F)	1 hour
40°C (104°F)	30 minutes

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 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
• SURFACE PREPARATION OF CONCRETE (FLOORS)	INFORMATION SHEET	1496
• RELATIVE HUMIDITY – SUBSTRATE TEMPERATURE – AIR TEMPERATURE	INFORMATION SHEET	1650

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