## **DESCRIPTION**

Low Temperature Universal Epoxy Coating

## PRINCIPAL CHARACTERISTICS

- Multi-purpose epoxy for industrial and marine applications
- Ballast tanks, voids, bilge, and underwater hull application
- · Heavy industry, structural steel
- Surface tolerant, compatible with water jetted surfaces
- · Excellent abrasion resistance
- Low VOC, extremely low HAPs
- · Excellent low temperature cure capability

## **COLOR AND GLOSS LEVEL**

- · Off White, Black, Oxide Red, Buff, Light Gray
- · Semi-gloss

Note: Epoxy coatings will chalk and fade upon exposure to sunlight, elevated temperatures, or chemical exposure. Discoloration and normal chalking does not impact performance. Light colors will darken over time. Some batch-to-batch variation in color is to be expected. Color matches are approximate.

## BASIC DATA AT 50°F (10°C)

Data for mixed product	
Number of components	Two
Volume solids	82 ± 2%
VOC (Supplied)	max. 1.6 lb/US gal (approx. 192 g/l)
Temperature resistance (Continuous)	To 200°F (93°C)
Temperature resistance (Intermittent)	To 250°F (121°C)
Recommended dry film thickness	4.0 - 12.0 mils (100 - 300 μm) per coat
Theoretical spreading rate	219 ft²/US gal for 6.0 mils (5.5 m²/l for 150 μm)
Shelf life	Base: at least 36 months when stored cool and dry Hardener: at least 24 months when stored cool and dry

## Notes:

- Intermittent temperature resistance should be less than 5% of the time, and maximum 24 hours
- 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

Ref. P056 Page 1/6



#### **Steel**

- Remove weld spatter, protrusions, and laminations in steel. Grind welds smooth in accordance with NACE RP-0178
- Remove all surface contaminants, oil and grease in accordance with SSPC SP-1
- Abrasive blast with an angular abrasive to an SSPC SP-10 cleanliness or higher for tank lining service. Achieve a surface profile of 2.0 – 4.0 mils (50 – 100 μm)
- The product may be applied over an SSPC SP-12 WJ-2(L) for non-tank lining applications where a previous blast profile can be exposed.
- For maintenance and repair in atmospheric service, the product can be applied over surfaces prepared in accordance with SSPC SP-2 or SSPC SP-3 (hand and power tool cleaning).
- AMERCOAT 114 A may be used as a pit filler for severely pitted steel and surface discontinuities
- Check with PPG technical service for the maximum allowable soluble salt level for water immersion service. This will vary based on the water chemistry and service temperatures

#### Concrete

- Remove all surface contaminants such as oil, grease, and embedded chemicals
- Abrade the surface per ASTM D4259 to remove all chalk and surface glaze or laitance
- Mechanical surface preparation should expose sub-surface voids and provide a surface profile equivalent to 60 grit sandpaper or coarser
- Surface should be free from moisture in accordance with ASTM D4263. Refer to Information Sheet # 1496ACUS for further details regarding moisture measurements

## **Non-ferrous metals**

 Lightly abrasive blast in accordance with SSPC SP-16 to achieve a uniform and dense 1.5-4.0 mil anchor profile. Use suitable epoxy primer

## Stainless steel

• Abrasive blast in accordance with SSPC SP-16 guidelines to achieve a uniform and dense 1.5-4.0 mil anchor profile. Size and hardness of abrasive should be adjusted as necessary based on the hardness of the substrate

## 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
- Sweep blast or otherwise thoroughly abrade the existing coating in accordance with SSPC SP-7
- 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
- Power tool clean the existing steel in accordance with SSPC SP-3 (atmospheric service) or SSPC SP-11 (immersion service)

Ref. P056 Page 2/6



## Substrate temperature and application conditions

- Surface temperature during application should be between 20°F (-7°C) and 140°F (60°C)
- Surface temperature during application should be at least 5°F (3°C) above dew point
- Ambient temperature during application and curing should be between 20°F (-7°C) and 122°F (50°C)
- Relative humidity during application should be between 0% and 85%

Note: The surface should be inspected to ensure there is no ice present on the substrate in cold weather conditions

#### SYSTEM SPECIFICATION

- · Primers: Inorganic zinc primers or zinc rich epoxies (atmospheric service)
- Topcoats: AMERCOAT 450H, AMERCOAT 229T, AMERSHIELD, PSX 700

## **INSTRUCTIONS FOR USE**

## Mixing ratio by volume: base to hardener 80:20 (4:1)

• Pre-mix base component with a pneumatic air mixer at moderate speeds to homogenize the container. Add hardener to base and agitate with a power mixer for 1–2 minutes until completely dispersed

## **Induction time**

Mixed product induction	Mixed product induction time		
Mixed product temperature	Induction time		
40°F (4°C)	30 minutes		
50°F (10°C)	15 minutes		
70°F (21°C)	5 minutes		

## Pot life

1 hour at 70°F (21°C)

Note: See ADDITIONAL DATA - Pot life

## **Application**

- Area should be sheltered from airborne particulates and pollutants
- · Avoid combustion gases or other sources of carbon dioxide that may promote amine blush and ambering of light colors
- · Ensure good ventilation during application and curing
- · Provide shelter to prevent wind from affecting spray patterns

## **Material temperature**

Material temperature during application should be between 40°F (4°C) and 80°F (27°C)

Ref. P056 Page 3/6



## Air spray

· Use standard conventional equipment

## **Recommended thinner**

THINNER 91-82 (AMERCOAT T-10)

## Volume of thinner

0 - 15%

## Airless spray

• 45:1 pump or larger

## **Recommended thinner**

THINNER 91-82 (AMERCOAT T-10)

## **Nozzle orifice**

0.019 - 0.023 in (approx. 0.48 - 0.58 mm)

## Nozzle pressure

17.2 - 20.7 MPa (approx. 173 - 207 bar; 2500 - 3000 p.s.i.)

## **Brush/roller**

• Use a high quality natural bristle brush and/or solvent resistant, 1/4" or 3/8" nap roller. Ensure brush/roller is well loaded to avoid air entrainment. Multiple coats may be necessary to achieve adequate film-build

## **Recommended thinner**

AMERCOAT T-10 THINNER

## Volume of thinner

0 - 5%

## **Cleaning solvent**

Amercoat 12 Cleaner (Thinner 90-58)

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Ref. P056 Page 4/6

## **ADDITIONAL DATA**

Overcoating interval for	Overcoating interval for DFT up to 6.0 mils (150 μm)					
Overcoating with	Interval	20°F (-7°C)	32°F (0°C)	50°F (10°C)	70°F (21°C)	90°F (32°C)
itself	Minimum	24 hours	16 hours	8 hours	4 hours	2 hours
	Maximum	3 months	2 months	30 days	14 days	7 days
urethane and PSX	Minimum	24 hours	16 hours	8 hours	4 hours	2 hours
	Maximum	30 days	14 days	10 days	5 days	48 hours

## Notes:

- Antifouling coatings should be applied when the previous coat of epoxy is tack free, but impressionable with moderate finger tip
  pressure
- 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
- Dry times are dependent on air and surface temperatures as well as film thickness, ventilation, and relative humidity. Maximum
  recoating time is highly dependent upon actual surface temperatures not simply air temperatures. Surface temperatures should be
  monitored, especially with sun-exposed or otherwise heated surfaces. Higher surface temperatures shorten the maximum recoat
  window
- Surface must be clean and dry. Any contamination must be identified and removed. A detergent wash with PREP 88 or equivalent is required prior to application of topcoats after 30 days of exposure. However, particular attention must be paid to surfaces exposed to sunlight where chalking may be present. In those situations, a further degree of cleaning may be required. PPG Technical Service can advise on suitable cleaning methods. If maximum recoat/topcoat time is exceeded, then roughen surface.

Curing time for DFT up to	Curing time for DFT up to 6.0 mils (150 µm )		
Substrate temperature	Dry to touch	Dry to handle	Service- water immersion
20°F (-7°C)	8 hours	22 hours	14 days
32°F (0°C)	5 hours	10 hours	10 days
50°F (10°C)	3 hours	7 hours	7 days
70°F (21°C)	1.5 hours	3 hours	5 days
90°F (32°C)	45 minutes	1.5 hours	3 days

ot life (at application viscosity)		
Mixed product temperature	Pot life	
50°F (10°C)	90 minutes	
70°F (21°C)	60 minutes	
90°F (32°C)	40 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

Ref. P056 Page 5/6



## **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 -	INFORMATION SHEET	1431
	TOXIC HAZARD		

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this sheet shall prevail over any translation thereof.

Packaging: Available in 1-gallon and 5-gallon kits

Description
Buff Base
Light Gray Base
F/S 23270 Haze Gray
Off-White Base
Oxide Red Base
Black Base
Hardener

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Ref. P056 Page 6/6