AMERCOAT® 399

DESCRIPTION

High-solids fast dry epoxy primer/coating

PRINCIPAL CHARACTERISTICS

- Fast dry times for rapid topcoating
- Low VOC
- Good drying properties even at low temperatures

COLOR AND GLOSS LEVEL

- Standard primer colors, Hopper Car Gray, Black, White, Buff and Pearl Gray
- Semi-gloss

Note: Epoxy coatings will characteristically chalk and fade upon exposure to sunlight. Light colors are prone to ambering to some extent

BASIC DATA AT 68°F (20°C)

Data for mixed product	
Number of components	Two
Volume solids	83 ± 2%
VOC (Supplied)	max. 1.5 lb/US gal (approx. 180 g/l)
Temperature resistance (Continuous)	To 200°F (93°C)
Temperature resistance (Intermittent)	To 350°F (177°C)
Recommended dry film thickness	4.0 - 8.0 mils (100 - 200 µm) depending on system
Theoretical spreading rate	266 ft^2/US gal for 5.0 mils (6.6 m^2/l for 125 µm)
Shelf life	Base: at least 36 months when stored cool and dry Hardener: at least 24 months when stored cool and dry

Notes:
- 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
- Color will drift at elevated temperatures

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- Coating performance is, in general, proportional to the degree of surface preparation

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Steel

- Remove all surface contaminants, oil and grease in accordance with SSPC SP-1
- Abrasive blast with an angular abrasive to an SSPC SP-6 cleanliness or higher. Achieve a surface profile of 1.5 – 4.0 mils (38 – 100 µm)
- SSPC SP WJ-2(L) is also acceptable over a previous blasted surface
- 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).

Non-ferrous metals and 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
- Aluminum may be treated with a surface treatment compliant with Mil-DTL-5541 or equivalent (non-immersion applications only).

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)

Substrate temperature and application conditions

- Surface temperature during application should be between 20°F (-7°C) and 122°F (50°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 above 0% and below 90%

SYSTEM SPECIFICATION

- Primers: Direct to substrate; DIMETCOTE- Series Primers, AMERCOAT 68HS, AMERCOAT 68MCZ, AQUAPON 97-670 VOC
- Topcoats: AMERCOAT 450-series polyurethanes, AMERSHIELD, PSX 700, PSX One, AMERCOAT 220-series Acrylics, PITTHANE series urethanes, DURATHANE DTM

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 50:50 (1:1)

- 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

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Mixed product induction time	
Mixed product temperature	**Induction time**
50°F (10°C)	20 minutes
70°F (21°C)	15 minutes
Above 75°F (24°C)	None

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 50°F (10°C) and 90°F (32°C)

Air spray

- Use standard conventional equipment

Recommended thinner

THINNER 21-06 (AMERCOAT 65), THINNER 91-82 (AMERCOAT T-10), or THINNER 21-25 (AMERCOAT 101) (recommended for > 90°F (32°C))

Volume of thinner

0 - 20%

Nozzle orifice

Approx. 0.070 in (1.8 mm)

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Airless spray

- 45:1 pump or larger
- Can be applied with plural component equipment

Recommended thinner

THINNER 21-06 (AMERCOAT 65), THINNER 91-82 (AMERCOAT T-10), or THINNER 21-25 (AMERCOAT 101) (recommended for > 90°F (32°C))

Volume of thinner

0 - 10%

Nozzle orifice

0.017 – 0.019 in (approx. 0.43 – 0.48 mm)

Brush/roller

- Use a high quality natural bristle brush and/or solvent resistant, 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

Thinner 21-06 (Amercoat 65), Thinner 91-82 (T-10), or Thinner 21-25 (Amercoat 101 - for hot surfaces)

Volume of thinner

0 – 10%

Cleaning solvent

Amercoat 12 Cleaner (Thinner 90-58) or Amercoat 65 Thinner (Thinner 21-06)

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ADDITIONAL DATA

Overcoating interval for DFT up to 8.0 mils (200 µm)					
Overcoating with...	**Interval**	**32°F (0°C)**	**50°F (10°C)**	**70°F (21°C)**	**90°F (32°C)**
itself	Minimum	24 hours	6 hours	3 hours	1 hour
	Maximum	3 months	2 months	30 days	14 days
AMERCOAT 450H, PITTHANE ULTRA	Minimum	24 hours	6 hours	3 hours	1 hour
	Maximum	30 days	30 days	30 days	14 days
AMERSHIELD VOC, PSX	Minimum	24 hours	6 hours	3 hours	1 hour
	Maximum	30 days	21 days	10 days	4 days

Notes:

- 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.
- 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
- The maximum recoatable limit for Amercoat 399 maybe extended to 3 months when applying a polyurethane after treatment with Prep 88 Cleaner in accordance with the Prep 88 product data sheet. Amercoat 399 may be recoated with itself indefinitely after treatment with Prep 88 cleaner with atmospheric service. Aged and freely chalking Amercoat 399 is recoatable with itself or with an acrylic polyurethane topcoat when cleaned with Prep 88 cleaning in accordance with the product data sheet instructions.

Curing time for DFT up to 8.0 mils (200 µm)		
Substrate temperature	**Dry to touch**	**Dry to handle**
32°F (0°C)	24 hours	38 hours
50°F (10°C)	8 hours	13 hours
70°F (21°C)	2.5 hours	4.5 hours
90°F (32°C)	1 hour	2 hours

Pot life (at application viscosity)	
Mixed product temperature	**Pot life**
50°F (10°C)	2 hours
70°F (21°C)	1 hour
90°F (32°C)	30 minutes - 45 minutes

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Pot Life -when thinned 10% with Amercoat T-10 or Amercoat 8 thinner	
Mixed product temperature	**Pot life**
50°F (10°C)	2.5 hours
70°F (21°C)	1.5 hours
80°F (27°C)	1 hour - 1.5 hours
90°F (32°C)	45 minutes - 55 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

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Packaging: Available in 5-gallon kits and 55-gallon drums; (5-gallon kits have 2.5 gallons of base and 2.5 gallons of hardener, 55-gallon drums have 50 gallon fills)

Product code	Description
AT 399-254	Hopper Gray Base
AT 399-3	White Base
AT 399-9	Black Base
AT 399-23	Pearl Gray Base
AT 399-B	Hardener