AMERCOAT® 78 HB

DESCRIPTION

Two-component, amine-cured coal tar epoxy

PRINCIPAL CHARACTERISTICS

- Excellent chemical, soil and water immersion resistance
- Can be applied up to 16.0 mils (400 µm) per coat
- Performance equivalent to SSPC Paint 16
- Suitable for wet H2S environment
- Suitable for single coat applications

COLOR AND GLOSS LEVEL

- Black
- Flat

Note: Color will be variable due to the nature of coal tar epoxies. When topcoated, the coal tar will bleed through causing discoloration of the topcoat

BASIC DATA AT 68°F (20°C)

Data for mixed product	
Number of components	Two
Volume solids	78 ± 3%
VOC (Supplied)	EPA Method 24: 1.9 lb/US gal (228.0 g/l)
Temperature resistance (Continuous)	To 300°F (149°C)
Recommended dry film thickness	12.0 - 16.0 mils (300 - 400 µm) depending on system
Theoretical spreading rate	104 ft^2/US gal for 12.0 mils (2.6 m^2/l for 300 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
- Color will drift at elevated temperatures

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RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

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. Achieve a surface profile of 2.0 – 4.0 mils (50 – 100 µm)
- 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

- Prepare in accordance with SSPC SP-13 guidelines
- Abrade surface per ASTM D-4259 to remove all efflorescence and laitance, to expose subsurface voids, and to provide a surface roughness equivalent of 60 grit sandpaper or coarser
- Test for moisture by conducting a plastic sheet test in accordance with ASTM D4263
- Fill voids as necessary with AMERCOAT 114 A epoxy filler

Galvanized steel

- Use a suitable epoxy primer
- 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 1.5 – 3.0 mils (38 – 75 µm). When light abrasive blasting is not possible, galvanizing can be treated with a suitable zinc phosphate conversion coating.
- Galvanizing that has at least 12 months of exterior weathering and has a rough surface with white rust present may be over-coated after power washing and cleaning to remove white rust and other contaminants
- The surface must have a measurable profile
- A test patch is recommended to determine compatibility and adhesion
- Not recommended over chromate sealed galvanizing without blasting to thoroughly remove chromates. Adhesion problems may occur

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).

Substrate temperature

- Surface temperature during application should be between 40°F (4°C) and 120°F (49°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 40°F (4°C) and 122°F (50°C)
- Relative humidity during application should be between 0% and 85% (0% to 50% using dehumidification for tank linings)

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SYSTEM SPECIFICATION

- Primers: Amerlock Sealer, Amercoat 370, Amerlock 2/400, Amercoat 385

Notes:
- An epoxy tie coat (1.0 – 4.0 mils (25 – 100 µm) DFT) is recommended when applying directly over zinc primers
- Product can be used direct-to-metal or over a suitable holding primer when required

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 95:5 (19:1)

- Pre-mix base component with a pneumatic air mixing at moderate speeds to homogenize the container. Add hardener to base and agitate with a power mixer for 2-3 minutes until completely dispersed
- Scrape sides during mixing
- Rinse the thinner container with a small amount of thinner and add to the mixture

Induction time

Mixed product induction time	
Mixed product temperature	**Induction time**
50°F (10°C)	15 minutes
60°F (16°C)	10 minutes
Above 70°F (21°C)	5 minutes

Pot life

4 hours 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.
- Ensure good ventilation during application and curing
- For tank lining, dehumidification equipment is highly recommended
- Provide shelter to prevent wind from affecting spray patterns
- Bulletin #1489 for further information on prevention, detection, and removal of amine blush
- Refer to INFORMATION SHEET 1434 for more details on ventilation requirements for tank lining applications

Material temperature

Material temperature during application should be between 50°F (10°C) and 90°F (32°C)

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Airless spray

- 45:1 pump or larger
- Use of in-line heaters and insulated lines may be required for proper atomization in cold weather and with long fluid lines

Recommended thinner
THINNER 21-06 (AMERCOAT 65)

Nozzle orifice
0.019 – 0.023 in (approx. 0.48 – 0.58 mm)

Brush/roller

- Use a high quality natural bristle brush. Ensure brush is well loaded to avoid air entrainment. Brush application is limited to small touch up areas of a few square inches

Recommended thinner
AMERCOAT 65

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

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	**Theoretical spreading rate**
1.0 mils (25 µm)	1251 ft^2/US gal (31.2 m^2/l)
16.0 mils (400 µm)	78 ft^2/US gal (2.0 m^2/l)

Overcoating interval for DFT up to 16.0 mils (400 µm)				
Overcoating with...	**Interval**	**50°F (10°C)**	**70°F (21°C)**	**90°F (32°C)**
itself	Minimum	24 hours	12 hours	7 hours
	Maximum	3 days	24 hours	12 hours

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Overcoating interval when using Amercoat 861 accelerator at 1/4 pint per 5 gallons (@16 mils)					
Overcoating with...	**Interval**	**40°F (4°C)**	**50°F (10°C)**	**70°F (21°C)**	**90°F (32°C)**
itself	Minimum	36 hours	19 hours	9 hours	6 hours
	Maximum	3 days	48 hours	20 hours	9 hours

Notes:

- 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
- Expose to a maximum of 6 hours of direct sunlight prior to recoating. Ensure surface remains dry between coats
- Surface must be clean and dry. Any contamination must be identified and removed. If maximum recoat/topcoat time is exceeded, then roughen surface by brush blasting when coating has cured to sufficiently for blasting (typically 5-14 days)

Curing time for DFT up to 16.0 mils (400 µm)			
Substrate temperature	**Dry to handle**	**Service- water immersion**	**Abrasion/Chemical resistance**
50°F (10°C)	48 hours	7 days	14 days
70°F (21°C)	16 hours	3 days	10 days
90°F (32°C)	10 hours	48 hours	7 days

Curing time with 1/4 pint AMERCOAT 861 accelerator for DFT up to 16.0 mils (400 µm)			
Substrate temperature	**Dry to handle**	**Service- water immersion**	**Abrasion/Chemical resistance**
40°F (4°C)	60 hours	7 days	14 days
50°F (10°C)	38 hours	5 days	10 days
70°F (21°C)	12 hours	56 hours	7 days
90°F (32°C)	8 hours	36 hours	5 days

Pot life (at application viscosity)	
Mixed product temperature	**Pot life**
50°F (10°C)	8 hours
70°F (21°C)	4 hours
90°F (32°C)	2 hours

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

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

Product code	Description
AT78HB-9	Black Base
AT78HB-B	Hardener