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

AMERCOAT® 78 HB

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)

AMERCOAT® 78 HB

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 hardener 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)

AMERCOAT® 78 HB

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

AMERCOAT® 78 HB

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

AMERCOAT® 78 HB

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

WARRANTY

PPG warrants (i) its title to the product, (ii) that the quality of the product conforms to PPG's specifications for such product in effect at the time of manufacture and (iii) that the product shall be delivered free of the rightful claim of any third person for infringement of any U.S. patent covering the product. THESE ARE THE ONLY WARRANTIES THAT PPG MAKES AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES, UNDER STATUTE OR ARISING OTHERWISE IN LAW, FROM A COURSE OF DEALING OR USAGE OF TRADE, INCLUDING WITHOUT LIMITATION, ANY OTHER WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR USE, ARE DISCLAIMED BY PPG. Any claim under this warranty must be made by Buyer to PPG in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life of the product, or one year from the date of the delivery of the product to the Buyer, whichever is earlier. Buyer's failure to notify PPG of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

LIMITATIONS OF LIABILITY

IN NO EVENT WILL PPG BE LIABLE UNDER ANY THEORY OF RECOVERY (WHETHER BASED ON NEGLIGENCE OF ANY KIND, STRICT LIABILITY OR TORT) FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IN ANY WAY RELATED TO, ARISING FROM, OR RESULTING FROM ANY USE MADE OF THE PRODUCT. The information in this sheet is intended for guidance only and is based upon laboratory tests that PPG believes to be reliable. PPG may modify the information contained herein at any time as a result of practical experience and continuous product development. All recommendations or suggestions relating to the use of the PPG product, whether in technical documentation, or in response to a specific inquiry, or otherwise, are based on data, which to the best of PPG's knowledge, is reliable. The product and related information is designed for users having the requisite knowledge and industrial skills in the industry and it is the end-user's responsibility to determine the suitability of the product for its own particular use and it shall be deemed that Buyer has done so, as its sole discretion and risk. PPG has no control over either the quality or condition of the substrate, or the many factors affecting the use and application of the product. Therefore, PPG does not accept any liability arising from any loss, injury or damage resulting from such use or the contents of this information (unless there are written agreements stating otherwise). Variations in the application environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results. This sheet supersedes all previous versions and it is the Buyer's responsibility to ensure that this information is current prior to using the product. Current sheets for all PPG Protective & Marine Coatings Products are maintained at www.ppgpmc.com. The English text of this sheet shall prevail over any translation thereof.

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

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