

Amercoat 78HBC

Coaltar Epoxy

Amercoat 78HB is used in USA

Product Data/ Application Instructions

- Up to 500 µm of protection in only one coat, eliminating intercoat adhesion problems of two-coat coaltar epoxies
- One-coat application significantly reduces labour costs
- Superior application by airless and conventional spray
- For tanklining, immersion or non-immersion service
- Suitable for waste treatment plant service and polluted water
- Can be applied and cures at low temperatures (application possible down to -5°C, provided the substrate is free of ice)

Typical Uses

Marine structures, piling, bilges, ballast tanks, crude oil and cargo/ballast tanks, ships bottoms; pipe coating and lining; industrial coating in power plants, oil production and refining plants, sewage treatment plants. Lining for immersion in crude oil, salt solutions, and fresh or brackish water or seawater.

Outstanding Characteristics

Amercoat 78HBC is a coaltar epoxy which displays exceptional application versatility, for use varying from cold to hot climates. It can be easily applied in one coat at a thickness of 500 µm. Alternatively, two coats at 200 µm or three at 125 µm may be applied, if required by specification. These features, combined with its high solids content and broad spectrum of water and chemical resistance, provide in Amercoat 78HBC a durable, high performance and economical coating. Amercoat 78HBC is suitable for use over both steel and concrete.

Systems using Amercoat 78HBC

Amercoat 78HBC normally does not require a primer or any additional topcoats. In the event that a holding primer is required Amercoat 71TC may be used. If an inorganic zinc silicate is required as primer, Amercoat 71TC has to be applied on the Dimetcote to serve as a tiecoat between primer and topcoat. (For both immersion and non-immersion services).

Physical Data

Finish	low sheen
Colour	black, dark brown
Components	2
Mixing ration (by volume)	
resin	86 parts
cure	14 parts
Curing mechanism	solvent release and chemical reaction between components
Volume solids	75 % (ASTM D2697, modified)*
VOC**	
EC SED 1999/13/EC.....	215 g/kg (318 g/l)
Dry film thickness	250-500 µm per system ***
Number of coats	1-2 (marine 2 coats)
Calculated coverage	3.0 m ² /l at 250 µm
Allow for application losses, surface irregularities, etc.	
Specific gravity	1.50 kg/l
Flash points (Closed Cup). °C	
resin	31
cure	25
Amercoat 18	27

* Volume solids is measured in accordance with ASTM D2697 modified. Slight variations ± 3% may occur due to colour and testing variances.

** VOC figures are quoted according to both the EC directive 1999/13/EC which are theoretically calculated figures.

*** The dry film thickness is depending on final purpose and environmental conditions.

For Marine purpose a 2 coat application is recommended.

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Surface Preparation

STEEL - Welds should be continuous with no skipwelds on overlapping steel surfaces. Blast in accordance with Swedish Standard Sa 2½ SIS 05 5900 - 1967, ISO 8501-1 or Steel Structures Painting Council SP-10. NOTE: Blast to achieve a 50 to 100 µm profile, as determined with *Testex* Tape or similar instrument. Remove abrasive residues and dust from surface.

CONCRETE - Light abrasive blasting is best to remove all previous coatings, chalk and surface glaze or laitance. After blasting, small holes or voids in cast concrete wall or overhead surface should be filled with a suitable epoxy filler compound before applying Amercoat 78HBC.

DIMETCOTE - Amercoat 71TC must be used as a tiecoat over Dimetcote prior to application of Amercoat 78HBC. (AMERCOAT 71TC - Surfaces coated with Amercoat 71TC must be dry and free of all contamination. Refer to application instructions of Amercoat 71TC for drying time and curing time limitations.)

IMPORTANT - Apply Amercoat 78HBC as soon as possible after surface preparation to prevent any contamination. Do not leave blasted steel uncoated overnight. In case of contamination, remove contaminants. Spot blast steel if needed. In order to reach maximum resistance against mechanical and chemical influences, the substrate temperature should be above 5 °C during application and curing.

Application Equipment

The following equipment is listed as a guide and suitable equipment from other manufacturers may be used. Adjustments of pressure and change of tip size may be needed to obtain the proper spray characteristics.

AIRLESS SPRAY - Standard airless spray equipment, such as Graco, DeVilbiss, Nordson-Bede, Spee-Flo or others having a fluid tip with a 0.53 to 0.64 mm (0.021 to 0.025 inch) orifice at 15 MPa (= approx 150 bar; 2130 p.s.i.)

CONVENTIONAL SPRAY – nozzle orifice 1.5-3.0 mm at 0.2-0.4 Mpa (= approx 2-4 bar; 28-57 p.s.i.)

MIXER - Use power mixer powered by an air motor or an explosion proof electric motor.

Application Data Summary

Amercoat 78HBC is an amine cured, high build, coaltar epoxy coating for non-immersion as well as immersion service, providing excellent corrosion and chemical resistance and full film thickness in only one coat. If conditions exist that are not within the requirements or limitations described, consult your PPG representative.

Substrate steel or concrete

Application methods airless or conventional spray

Environmental Conditions

(during application)

Air temperature -5 to 40°C

Surface temperature -5 to 40°C

Material temperature 15 to 30°C

To prevent moisture condensation during application, surface temperature must be at least 3°C above dew point. Never apply coatings under adverse environmental conditions. Ensure good ventilation when applied in confined areas to assist evaporation and eliminations of solvents.

Recoat and Repair Schedule

When two coats are specified for repair of damaged, imperfect or thin areas, additional Amercoat 78HBC should be applied within the following drying times to ensure proper adhesion:

Table at 250 µm

Surface temperature (°C) -5 5 10 15 20 30 40

Maximum drying time (days) 40 40 30 24 18 14 7

NOTE: do not allow more than six hours of total sunlight exposure before applying repair coat and protect against rain, moisture, or condensation, otherwise intercoat adhesion may be impaired. If the maximum drying time has been exceeded, the surface must be roughened by brush blasting before applying repair coat.

(Sun exposed)

The indicated drying and curing times are for a dry film thickness of 250 µm. If the thickness is greater allow additional curing time. In all cases higher temperatures will shorten and lower temperatures will lengthen the curing times.

Surface temperature (°C) -5 5 10 15 20 30 40

Maximum drying time (days) 21 21 12 8 4 3 2

For most exterior atmospheric exposures, the coating may be placed in service as soon as it has dried sufficiently to withstand handling.

dry to handle (°C) 5 10 15 20 30 40

Minimum drying time(hours) 48 30 24 16 8 5

For immersion in polluted water or crude oil, where early abrasion resistance is not required such as ships, ballast tanks or bilges, the required curing times are as follows:

dry to handle (°C) 5 10 15 20 30 40

Minimum drying time(hours) 96 48 30 24 18 12

Potlife (at 20°C) 6 hours

Thinner/cleaner Amercoat 18

Application Data

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Application Procedure

Amercoat 78HBC is packaged in the proper mixing proportions of resin and cure.

resin: 17.2 l in 20 l can

cure: 2.8 l in 4 l can

1. Flush equipment with Amercoat 18 before use.
2. Stir resin to an even consistency with a power mixer.
3. Add cure to resin, and continue stirring for 5 minutes. NOTE: Since the potlife is limited and shortened by high temperatures, do not mix more material than will be used in 6 hours at 20°C or 4 hours at 30°C.
4. For conventional spray, thin only as needed for workability with no more than 10% of thinner Amercoat 18. Thinning is normally not needed for airless spray.
5. Stir during application to maintain uniformity of material. Apply a heavy wet coat in even, parallel passes with 50% overlap. Immediately follow with additional cross-spray passes to obtain a continuous film without bare spots, pinholes or holidays.
6. Double coat all welds, corners, sharp edges, rivets and bolts, rough spots, etc.
7. Application at 533 µm wet film thickness will normally provide 400 µm dry film.
8. Check thickness of dry and cured coating with a non-destructive dry film thickness gauge, such as Mikrotest or Elcometer. If less than specified thickness, apply additional material as needed. Allowable thickness range is 125 to 500 µm depending upon service conditions.
9. When a pinhole-free coating is required, check continuity of dry but uncured coating with a high voltage holiday detector. Voltage setting on the equipment should not exceed a level of 3 Volts per µm of coating thickness, e.g. 1200 Volts for 400 µm dft of the coating.
10. Apply additional material needed for correction of film thickness and repair of pinholes or damaged areas within the times shown in Recoat and Repair Schedule. The surface must be clean when repair coat is applied.
11. In confined areas ventilate with clean air during application and drying until all solvents are removed. Temperature and humidity of ventilating air must be such that moisture condensation will not form on surface.
12. Clean all equipment with Amercoat 18 immediately after use or at least at the end of each working day or shift. When left in spray equipment, Amercoat 78HBC will cure and cause clogging.

Shipping Data

Packaging	
resin	17.2 l in 20 l can
cure	2.8 l in 4 l can
Shelf life	1 year from shipment date when stored indoors in unopened, original containers at 5 to 40°C (41 to 104°F).

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Caution

This product is flammable. Keep away from heat and open flame. Keep container closed. Use with adequate ventilation. Avoid prolonged and repeated contact with skin. If used in confined areas, observe the following precautions to prevent hazards of fire or explosion or damage to health:

1. circulate adequate fresh air continuously during application and drying;
2. use fresh air masks and explosion proof equipment;
3. prohibit all flames, sparks, welding and smoking.

Do not empty into drains. Take precautionary measures against static discharges. For specific information on hazardous ingredients, required ventilation, possible consequences of contact, exposure and safety measures see Safety Data Sheet.

Safety

Since improper use and handling can be hazardous to health and cause of fire or explosion, safety precautions included with Product Data/Application Instruction and Material Safety Data Sheet must be observed during all storage, handling, use and drying periods.

Warranty

PPG warrants its products to be free from defects in material and workmanship. PPG's sole obligations and Buyer's exclusive remedy in connection with the products shall be limited, at PPG's option, to either replacement of products not conforming this warranty or credit to Buyer's account in the invoiced amount of the non-conforming products. 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, or one year from the delivery date, whichever is earlier. Buyer's failure to notify PPG of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

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Due to PPG's policy of continuous product improvement, the information contained in this Product Data/Application Instructions sheet is subject to change without notice. It is the Buyer's responsibility to check that this issue is current prior to using the product. For the most up-to-date Product Data/Application Instructions always refer to the PPG Protective & Marine Coatings website at www.ppgpmc.com

To avoid any confusion that may arise through translation into other languages, the English version of the Product Data/Application Instructions will be the governing literature and must be referred to in case of deviations with product literature in other languages.

Condition of Sale

All our transactions are subject to our Terms and Conditions of Sale.

