

Amercoat 56E

Polyamide Epoxy

Product Data/ Application Instructions

- High solids tanklining
- Qualifies to Mil-C-4556 E for fuel storage
- Excellent resistance to refined petroleum products and fuels
- Suitable for water immersion service

Typical Uses

Amercoat 56E polyamide epoxy is used in marine and industry as a protective lining for fuel and water tanks in ships, for ballast water tanks and for storage tanks of fuel oils and petroleum products, etc. Amercoat 56E polyamide epoxy coating system consists of two coats; the first coat ivory, the second coat white.

Approval and Certificates

Complies with MIL-C-4556E specification from the US Navy for the storage of jet fuels.

Complies with the Shell test requirements for linings for aviation fuels (tested by TNO, the Netherlands).

Repair

Spot blast areas to Sa 2½, feathering edges of intact coating. Thoroughly remove dust or abrasive residue before touch up.

Physical Data

| | |
|--|---|
| Finish | flat |
| Colour | 1 st coat ivory 2 nd coat white |
| Components | 2 |
| Mixing ratio (by volume) | |
| resin | 4 parts |
| cure | 1 part |
| Curing mechanism | solvent release and chemical reaction between components |
| Volume solids | 71% (ISO 3233)* |
| VOC** | |
| EC SED 1999/13/EC | 230 g/kg (327 g/l) |
| UK PG6/23(92) Appendix 3. | 290 g/l (x lbs/gal) |
| Dry film thickness | 75-150 µm per coat |
| Number of coats | 2 coats of 100 µm for fuel storage 2 coats at 150 µm as water tanklining |
| Calculated coverage | 9.5 m ² /l at 75 µm 4.7 m ² /l at 150 µm |
| Allow for application losses, surface irregularities, etc. | |
| Flash points | |
| (Closed Cup)..... | °C °F |
| resin | 25 77 |
| cure | 24 75 |
| Amercoat 9HF..... | 26 79 |
| Amercoat 65 | 24 75 |
| Amercoat 12 | 24 75 |

* volume solids is measured in accordance with ISO 3233. 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 and the UK PG6/23(92) Appendix 3 which are practically determined figures.

Amercoat 56E

Surface Preparation

STEEL - Immersion service: Blast steel to Sa 3 in accordance with Swedish Standard SIS 05 5900 - 1967, ISO 8501-1 or SSPC SP-5.

NOTE: Blast to achieve a surface profile not to exceed

75 µm as determined with *Testex* Tape or similar instrument. Remove abrasive residues and dust from surface.

IMPORTANT - Apply Amercoat 56E 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.

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 0.015 to 0.021 inch (0.38 to 0.53 mm) fluid tip.

CONVENTIONAL SPRAY - Industrial equipment such as DeVilbiss MBC or JGA gun with 78 or 765 air cap and "E" fluid tip and heavy mastic spring or Binks No. 18 or 62 with a 66 x 63 PB nozzle setup. Separate air and fluid pressure regulators, mechanical pot agitator and a moisture and oil trap in the main air supply line are recommended.

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

Application Data Summary

Like all high performance coatings, Amercoat 56E must be applied as recommended to obtain the maximum protection for which this coating is formulated. To obtain the maximum performance for which Amercoat 56E is formulated, strict adherence to all application instructions, precautions, conditions and limitations is necessary. If conditions exist that are not within the requirements or limitations described, consult your PPG representative.

Application Data

| | |
|---------------------------|-------------------------------|
| Substrate | steel |
| Application methods | airless or conventional spray |
| Potlife at | °C/°F 30/86 20/68 10/50 |
| (in hours) | 1½ 4 6 |

Potlife is dependent on temperature and quantities mixed.

| | | | |
|--|-----------|-------------|--|
| Environmental Conditions (during application) | | | |
| Air temperature | 5 to 50°C | 41 to 122°F | |
| Surface temperature | 5 to 60°C | 41 to 140°F | |

To prevent moisture condensation during application, surface temperature must be at least 3°C/5°F above dew point.

| | | | | |
|---|-------|-------|-------|-------|
| Drying Times (ASTM D1640) at 100µm dft | | | | |
| (in hours) | °C/°F | 30/86 | 20/68 | 10/50 |
| dry to touch | 1 | 2 | 3 | |
| dry through..... | 8 | 12 | 18 | |
| dry to recoat or topcoat (minimum) | 8 | 12 | 18 | |

| | | | | |
|--------------------------------------|-------|-------|-------|-------|
| Maximum Topcoat or Self-recoat Times | | | | |
| (in months) | °C/°F | 30/86 | 20/68 | 10/50 |
| immersion | 6 | 6 | 6 | |

| | | | | |
|-------------------------------|-------|-------|-------|-------|
| Time before service at 150 µm | | | | |
| (in days) | °C/°F | 30/86 | 20/68 | 10/50 |
| immersion | 3 | 6 | 10 | |

NOTE: drying and curing times are dependent on air and steel temperature, applied film thickness, ventilation and other environmental conditions. Times are proportionally shorter at higher temperature and longer at lower temperatures.

| | |
|---------------|------------------------------|
| Thinner | Amercoat 65/ Amercoat 9HF |
| Cleaner | Amercoat 12 |

Amercoat 56E

Application Procedure

Amercoat 56E is packaged in the proper mixing proportions of resin and cure.

resin: 16 l in 20 l can
cure: 4 l in 5 l can

1. Flush equipment with Amercoat 12 before use.
2. Stir resin (in the larger container) to an even consistency with a power mixer.
3. Add cure to resin solution, 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 4 hours at 20°C/68°F.
4. Thin only if necessary for workability, add up to 10 vol. % of thinner.
5. Apply a wet coat even, parallel passes. Overlap each pass 50% to avoid bare areas, pinholes or holidays. When applying directly over inorganic zincs at full thickness, bubbling may occur. A test patch is recommended and if bubbling occurs, apply a "mist coat". Consult your PPG representative for further information.
6. Double coat all welds, rough spots, sharp edges and corners, rivets, bolts, etc.
7. Application at 217 µm wet film thickness will normally provide 150 µm dry film.
8. Check thickness of dry coating with a non-destructive dry film thickness gauge, such as Mikrotest or Elcometer. If less than specified thickness, apply additional material as needed.
9. Small damaged or bare areas and random pinholes or holidays can be touched up by brush. Repair larger areas by spray.
10. 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.
 - # For conventional spray, use adequate air pressure and volume to ensure proper atomization.
 - # Normal recommended dry film thickness is 75 to 150 µm. However, if greater thickness is applied in local areas because of overlapping, no runs or sags will normally occur at a dry film thickness up to 200 µm. Total dry film thickness must not exceed 400 µm.
11. Clean all equipment with Amercoat 12 immediately after use or at least after each working day or shift. When left in spray equipment, Amercoat 56E will cure and cause clogging.

Shipping Data

Packaging
resin 16 l in 20 l can
cure 4 l in 5 l can

Shipping weight
resin approx. 25 kg
cure approx. 7 kg

Shelf life 1 year from shipment date
when stored indoors in
unopened, original containers at
5 to 40°C (41 to 104°F)

Amercoat 56E

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 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.

PPG makes no other warranties concerning the product. No other warranties, whether express, implied or statutory, such as warranties of merchantability or fitness particular purpose, shall apply. In no event shall PPG be liable for consequential or incidental damages.

Any recommendations or suggestion relating to the use of the products made by PPG, whether in its technical literature, or response to specific enquiry, or otherwise, is based on data believed to be reliable; however, the products and information are intended for use by Buyer's having requisite skill and know-how in the industry, and therefore it is Buyer to satisfy itself of the suitability of the products for its own particular use and it shall be deemed that Buyer has done so, as its sole discretion and risk. Variation in environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results.

Limitation of Liability

PPG's liability on any claim of any kind, including claims based upon PPG's negligence or strict liability, for any loss or damage arising out of, connected with, or resulting from the use of the products, shall in no case exceed the purchase price allocable to the products or part thereof which give rise to the claim. In no event shall PPG be liable for consequential or incidental damages.

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.

