



Amercoat 235

Multi Purpose Epoxy Coating

Product Data/ Application Instructions

- Salt and fresh water resistant
- High performance, self priming multi-purpose epoxy
- Can be applied over mechanically cleaned steel and suitably prepared concrete
- Adheres to most types of existing coating systems
- Cures even below 0°C
- If required Amercoat 235 can be overcoated with a wide range of topcoats
- Fast dry, can be recoated after 4 hours

Typical Uses

Specially formulated as a high performance coating for marine and industrial facilities, ballast tanks, bilges, wet voids and draining pipes, above and below water hulls. On steel and concrete structures in industrial facilities, bridges, tank exteriors, containers, oil tanks, piping, roofs and other areas subject to moisture, high humidity, marine weathering and other exposure. Amercoat 235 has good resistance to splash, spillage and fumes of acids, alkalies, solvents, fresh and salt water.

Approvals and Certificates

Classified by Marintek, as class B1 for use in ballast water tanks. Approved by Lloyd's Register as a ballast tank coating. Passes the requirements for ballast tanks to MIL-P-23236B (SH), type I and IV Class 2.

USDA approval for incidental food contact.

Approved by Canada Health and Welfare for railcars, dry food and fish holds (off white and buff only).

Meets the requirements of STG guideline 2220 regarding compatibility with cathodic protection.

Outstanding Characteristics

Amercoat 235 can be used as a high performance maintenance coating with excellent adhesion to a wide range of existing coatings. For corroded areas, Amercoat 235 can be applied to mechanically cleaned surfaces. Adhesion is excellent to a wide variety of substrates, including concrete, aluminium and galvanized surfaces. Amercoat 235 has excellent application characteristics. It can be applied by conventional and airless spray equipment, brush or roller.

Physical Data

Finish	semi-gloss
Colours	limited number of colours *
Components	2
Mixing ratio (by volume)	
resin	4 parts
cure	1 part
Curing mechanism	solvent release and chemical reaction between components
Volume solids	68% (ISO 3233)
VOC**	
EC SED 1999/13/EC.....	229 g/kg (301 g/l)
UK PG6/23(92) Appendix 3 .	292 g/l (2.4 lbs/gal)
Dry film thickness	100 - 200 µm per coat
Number of coats	1 - 3
Calculated coverage	6.8 m ² /l at 100 µm
	3.4 m ² /l at 200 µm
Allow for application losses, surface irregularities, etc.	
Specific gravity	approx. 1.2 kg/l depending on colour (mixed product)
Flash points (Closed Cup)	
resin	28°C/82°F
cure	41°C/106°F
Amercoat 65	24°C/75°F

Chemical Resistance; environment suitability of Amercoat 235

	Splash and spillage	Fumes and weathering
Acidic	Fair	Good
Alkaline	Excellent	Excellent
Solvents	Excellent	Excellent
Salt solutions		
acidic	Good	Very Good
neutral	Excellent	Excellent
alkaline	Excellent	Excellent
Water	Excellent	Excellent

This chart is only a guide to show typical resistance of Amercoat 235.

Contact your PPG representative for your specific requirements.

*Surface discolouration might occur on exposure to outside weathering, UV light, elevated temperatures or chemicals; however, product performance is not affected.

** 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.

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Topcoating

If a further topcoat is requested a wide range of different types is available. Contact your PPG representative for specific recommendations.

Application Data Summary

For complete information on procedures, equipment and safety precautions, see application instructions. Like all high performance coatings, Amercoat 235 must be applied as recommended to obtain the maximum protection for which this coating is formulated. SURFACE PREPARATION - Abrasive blasting, or mechanical cleaning, depending on conditions. Existing coatings must be sound adhering and properly cleaned before applying Amercoat 235 as a maintenance topcoat.

EQUIPMENT - Standard industrial spray equipment, either airless or conventional, brush or roller. When applied by brush or roller additional coats may be required to reach specified dry film thickness.

Surface Preparation

Coating performance in general, is proportional to the degree of surface preparation. Abrasive blasting is usually the most effective and economical method. For circumstances where this is impossible or impractical, Amercoat 235 can be applied over mechanically cleaned surfaces.

STEEL, NON-IMMERSION - Amercoat 235 can be applied over mechanically cleaned surfaces. Remove water, salt, dirt, oil, loose rust and all rust scale. It is recommended to treat all surfaces with Amercoat 88 cleaner followed by high pressure water wash. Power tool clean in accordance with St 3 or SSPC SP-3 or hand tool clean in accordance with St 2 or SSPC SP-2. Water blasting is also acceptable. If possible, abrasive blasting to Sa 2½ is preferred.

Amercoat 235 can be applied over damp structures, but condensation on top of the wet coating must be avoided. STEEL, IMMERSION - Remove water, salt, dirt, oil, loose rust and all rust scale. It is recommended to treat all surfaces with Amercoat 88 cleaner followed by high pressure water wash. Blast to achieve Sa 2½ or SSPC SP-10. If blasting is impossible or impractical, surface preparation by power tool cleaning St 3 / SSPC SP-3 or high pressure water blast cleaning to D VIS WJ 3L is acceptable.

CONCRETE - Surfaces must be cured, clean, dry and free of non adherent coatings and disintegrated or chalky materials.

EXISTING COATINGS - Amercoat 235 may be used over most types of properly cleaned, tightly adhering coatings. In case existing coating system is unknown or based on conventional binders a test patch is recommended.

Application Equipment

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

AIRLESS SPRAY - Standard airless spray equipment, such as Graco Bulldog Hydra or larger with a 0.53 mm (0.021 inch) fluid tip or larger.

CONVENTIONAL SPRAY - Industrial equipment such as De Vilbiss MBC or JGA or Binks 18 or 62 spray gun. A moisture and oil trap in the main air supply line, a pressure material pot with mechanical agitator and separate regulators for air and fluid pressure are recommended.

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

BRUSH OR ROLLER - Use clean, short bristled brush or medium nap roller. Application by brush or roller will require at least 2 coats to achieve 125 µm dry film thickness

Application Data

Substrate steel, concrete or tightly adhering existing coatings

Application methods by airless or conventional spray, brush or roller*

Environmental conditions

Air temperature -18 to 50°C 0 – 122°F
Surface temperature -18 to 60°C 0 – 140°F

The surface temperature must be at least 3°C/5°F above the dew point to prevent moisture condensation.

Potlife (at 20°C/68°F) 5 hours

Induction time (at 20°C/68°F) 15 minutes

Drying Times (at 125 µm dft, (°C/°F) 10/50 20/68 30/86

dry through (hours) 12 10 7

fully cured (days) 7 6 5

dry to recoat (hours) 6 4 3

Maximum recoat time with epoxies is 4 weeks and with Amercoat 450S it is one week

Maximum recoating/topcoating times are dependent on temperature, degree of weathering, type of topcoat and service conditions of the complete coating system. Consult your PPG representative for specific recommendations. Drying times are dependent on temperature, ventilation and film thickness.

Thinner/cleaner Amercoat 65

* Brush or roller application may require additional coats.

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Application Procedure

Amercoat 235 is packaged in two components in the proper proportions which must be mixed together before use.

Resin 16 l in 20 l can
Cure 4 l in 5 l can

1. Flush equipment with recommended cleaner before use.
2. Stir both resin and cure 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 within potlife (5 hours at 20°C/68°F).
4. For conventional spray, thin only as needed for workability with no more than 10 % by volume of recommended thinner. Thinning is normally not needed for airless spray.
5. Stir during application to maintain uniformity of material. Apply a wet coat in even parallel passes. Overlap each pass 50% to avoid bare areas, pinholes or holidays. Give special attention to corners, welds, rough areas, edges.
6. Normal recommended dry film thickness per coat is 100 to 200 µm. Maximum dry film thickness per coat should not exceed 250 µm per coat.
7. The application of a wet film thickness of 150 to 300 µm will normally provide 100 to 200 µm of dry film. When applied by brush or roller two or more coats will be necessary to achieve recommended dry film thickness.
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.

Clean all equipment with recommended cleaner immediately after use or at least at the end of each working day or shift. When left in spray equipment, Amercoat 235 will cure and cause clogging

Shipping Data

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

Shipping weight
resin approx. 21 kg
cure approx. 5 kg

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

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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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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.

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