



Amercoat 4188

Modified epoxy coating

Product Data/ Application Instructions

- Two pack epoxy maintenance coating
- EPA compliant
- High build, high solids and low VOC
- Excellent abrasion and impact resistance
- Single coat application
- Tough and durable
- Suitable for water immersion
- Will continue to cure underwater

Typical Uses

Heavy duty protective coating designed for the offshore maintenance of splash zones and under-decking. Also ideal for the maintenance and protection of steelwork in other marine environments such as jetties, pontoons, dock walls and gates subject to continuous and intermittent tidal immersion. In addition Amercoat 4188 is suitable for other heavy industrial applications such as petrochemical, water treatment and power.

Mixing

Stir the resin component thoroughly, then add the cure and continue mixing until the product is uniform throughout. A powerful mixer should be used.

Overcoating

Amercoat 4188 is normally applied as a single coat application. However it can be overcoated with itself to increase the coating thickness or with a suitable cosmetic finish. Prior to overcoating it is essential that the surface is free of all contamination, in particular amine bloom if curing has been at low temperature and/or high relative humidity. Additionally the surface must be roughened by coarse abrasion or sweep blasted if overcoating after maximum time has elapsed

Physical Data

Finish	semi gloss
Colour	limited range made to order
Components	2
Mixing ratio (by volume)	
resin	4 parts
cure	1 part
Curing mechanism	solvent release and reaction between components.

Volume solids :..... 85+/-3%

VOC*

EC SED 1999/13/EC.....	105 g/kg (161 g/l)
UK PG6/23(92) Appendix 3.	168 g/l

Dry film thickness

	typical	minimum	maximum
Dry film thickness (µm)	500	300	750
Wet film thickness (µm)	558	353	882

(wet film thicknesses quoted are typical for one airless spray coat)

Calculated coverage

Allow for application losses, surface irregularities, etc.

Specific gravity..... typically 1.55 kg/l (mixed product)

Flash points

(Closed Cup)	°C	°F
resin	48	118
cure	40	104
Amercoat 65	24	75
Amercoat 12	21	75

* 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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Surface preparation

Areas to be blasted should be initially washed down using clean fresh water preferably by high pressure water jetting to remove dirt and soluble salts. Wet or dry abrasive blast clean to ISO 8501-1, Sa 2. The blast profile achieved should be approximately 75 microns to 100 microns and be angular as produced by grit. Application should occur before degradation of the surface takes place. If oxidation occurs then the steel should be re-prepared. Following wet abrasive blasting to ISO 8501-1 Sa 2 standard, slight oxidation of the surface is permitted prior to painting. However there must be no powdery rust deposits on the surface. If these are present the surface must be re-blasted. Performance will be dependent upon the degree of surface preparation. Amercoat 4188 can also be applied over suitable holding primers

Application

AIRLESS SPRAY: Use standard airless spray equipment capable of producing a minimum pressure at the tip of 2800 psi (200 kg/cm²). Adjustments of pressure, tip size and fan angle may be necessary to obtain the proper spray characteristics. Tip size range 17-25 thou (0.43-0.63mm).

BRUSH: Apply evenly using a clean, well loaded brush. More than one coat may be required to achieve the specified dry film thickness

Application Data

Substrate steel
Application methods airless spray, brush
Potlife (at 20°C/68°F) 45 minutes
Potlife time is dependent on prevailing temperatures.
Induction time (at 20°C/68°F) not applicable

Environmental conditions

Amercoat 4188 should only be applied within the limits of temperature and humidity set out below.

Relative humidity: Up to 90%
Surface temperature: Minimum 5°C/41°F
..... Maximum 45°C/113°F

The surface temperature must also be at least 3°C/5°F above the dew point.

Drying characteristics

Temperature	°C/°F	5/41	10/50	20/68
Touch dry		8 hours	6 hours	4 hours
Hard dry		24 hours	16 hours	12 hours
Overcoating (minimum)		24 hours	24 hours	16 hours
Overcoating (maximum)		7 days	4 days	2 days

Note: All information relates to the typical dry film thickness.

Drying and curing times are dependent on air and steel temperature, applied film thickness, ventilation and other environmental conditions. Times are shorter at higher temperatures and longer at lower temperatures. Amercoat 4188 will continue to cure underwater, although if immersed at the early stages of cure may show a tendency to 'bleach'. This will not affect the product's performance characteristics.

Thinner Amercoat 65

Cleaner Amercoat 12

Amercoat 4188

Application procedure

1. Flush the equipment with the recommended cleaning solvent before use.
2. Stir the resin (in the larger container) 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 temperature, do not mix more material than will be used within the potlife period.
4. For conventional spray, thin only as needed for workability with no more than 10 vol %. Thinning is normally not needed for airless spray.
5. Stir during application to maintain uniformity of material. Apply a wet even coat in parallel passes. Overlap each pass 50% to avoid bare areas, pinholes or holidays.
6. Double coat all welds, rough spots, sharp edges and corners, rivets, bolts, etc.
7. Application at 560µm wet film thickness will normally provide 500µm dry film thickness.
8. Check thickness of dry coating with a non-destructive dry film thickness gauge, such as Microtest 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.
11. Clean all equipment with recommended cleaner immediately after use or at least at the end of each working day shift. When left in spray equipment, the product will cure and cause clogging.

Before using the product, read the label on the can and consult the material safety data sheet

Shipping Data

Packaging	20 litres in two part units
resin	16 l in 20 l can
cure	4 l in 5 l can
Shipping weight (approx)	
resin	29 kg
cure	5 kg
Shelf life	1 year from shipment date or as indicated on label when stored indoors in unopened, original containers at 5 to 40°C (41 to 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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All our transactions are subject to our Terms and Conditions of Sale.