



Amercoat 4188

Modified epoxy coating

(formerly Steelguard 3518k)

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 underdecking. 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	168 g/l		
Dry film thickness	300-750 µm per coat		
	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	1.7 m ² /l at 500 µm		
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 cleaner.....	24	75	

Amercoat 4188

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, for example Amercoat 139.

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 cleaner

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. Thinning is normally not required 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).

Amercoat 4188

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

Ameron warrants its products to be free from defects in material and workmanship. Ameron's sole obligations and Buyer's exclusive remedy in connection with the products shall be limited, at Ameron'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 Ameron 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 Ameron of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

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Due to Ameron'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 Ameron Performance Coatings & Finishes website at www.amerondirect.co.uk

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.