



Amercoat 3905

High solids epoxy zinc phosphate primer

formerly Steelguard 3905

Product Data/ Application Instructions

- Superior, fast drying two pack epoxy primer
- EPA compliant
- High build, high solids and low VOC
- Complies with BS 5493:1977 - Table 4K Type KP1A
- BBA HAPAS and Network Rail approved
- Excellent adhesion to blast cleaned steel
- Excellent abrasion and impact resistance
- Rapid overcoating properties

Typical Uses

Anticorrosive primer for general structural steel operating in a wide range of environmental conditions such as bridges, marine structures, petroleum processing and storage facilities, chemical and power plants and other heavy industrial facilities.

Approvals

Amercoat 3905 is approved and registered to BBA HAPAS Roads and Bridges Certificate Reference 05/H116 (Highways Agency specification item 111) and Network Rail RT98 specification item 7.1.4.

Outstanding Characteristics

Amercoat 3905 exhibits excellent anti-corrosion properties as a single coat and in combination with suitable intermediate and topcoats.

Physical Data

Finish	matt		
Colour	red oxide, grey		
Components	2		
Curing mechanism	solvent release and reaction between components. Effective cure down to 5°C/41°F		
Volume solids :	74+/-3%		
VOC	220 g/l		
Dry film thickness	75-200 µm per coat		
	typical	minimum	maximum
Dry film thickness (µm)	100	75	200
Wet film thickness (µm)	135	101	270
(wet film thicknesses quoted are typical for one airless spray coat)			
Number of coats	1		
Calculated coverage	7.4 m ² /l at 100 µm		
Allow for application losses, surface irregularities, etc.			
Induction time (at 20°C/68°F)	not applicable		
Mixing ratio (by volume)			
resin	5 parts		
cure	1 part		
Specific gravity	1.67 kg/l (mixed product)		
Flash points (Closed Cup).....	°C	°F	
resin	28	82	
cure	30	86	
Amercoat 18	25	77	
Amercoat 12 cleaner.....	24	75	
Thinner	Amercoat 18		
Cleaner	Amercoat 12 cleaner		



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Surface preparation

Abrasive blast clean to ISO 8501-1, Sa2¹/₂. The blast profile achieved should be within the range 50 to 100 microns. Priming should occur before degradation of the surface takes place. If oxidation occurs then the surface should be re-prepared. The surface must be dry and free of dust, salts, grease and other contaminants immediately before coating.

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.

Application

AIRLESS SPRAY - Use standard airless spray equipment capable of producing a minimum pressure at the tip of 2800 psi (200 kg/cm²). Tip size range 17-19 thou (0.43-0.48mm). Adjustments to pressure and tip size/angle may be necessary to obtain spray characteristics required for specific substrate configurations.

BRUSH/ROLLER - Application by these methods should be limited to small areas only such as repairs and when stripe coating. Apply evenly using a clean, well-loaded brush or roller. With this application more than one coat may be necessary to achieve the required dry film thickness.

Overcoating

Typically overcoated with epoxy intermediates such as Amercoat 3926 and Amercoat 4373. Also suitable for topcoating with finishes such as Amercoat 450E and Amercoat 440HS. There are no maximum overcoating restrictions with these products provided the Amercoat 3905 is clean, dry and free of contamination before overcoating.

Application Data

Substrate blasted steel
Surface Preparation refer to the typical systems table for specific recommendations
Application methods airless spray, brush or roller

Environmental conditions

Amercoat 3905 should only be applied within the limits of temperature and humidity set out below.

Relative humidity: up to 90%

Surface temperature: 2 - 40°C (35 - 104°F)

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

As with most coatings early contact with water can result in water spotting damage. Care should be taken to protect the coating during the early stages of cure to prevent water marking.

This product will cure down to 0°C/32°F, however drying times will be extended.

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

Potlife (at 20°C/68°F) 2 hours

Potlife and drying times are dependent on prevailing temperatures.

Drying time (hours, °C/°F)	5/41	10/50	20/68
Touch dry	6	3	1½
Hard dry	10	6	3

Overcoating times (hours, °C/°F)	5/41	10/50	20/68
Minimum	8	5	2
Maximum	-	-	-

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Application Procedure

1. Clean the equipment with the recommended cleaning solvent before use.
2. Stir the resin component thoroughly, then add the cure and continue mixing until the product is uniform throughout. A powerful mixer should be used. Thinning is not required.
3. For airless spray, apply a wet even coat in parallel passes. Overlap each pass by 50% to avoid bare areas, pinholes or holidays.
4. Give special attention to welds, rough spots, sharp edges and corners, rivets, bolts, etc.
5. Application at 135µm wet film thickness will normally provide 100µm dry film.
6. 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.
7. Small damaged or bare areas and random pinholes or holidays can be touched up by brush. Repair larger areas either by spray, brush or roller using Amercoat 3905.
8. In confined areas ventilate with clean air during application and drying. The humidity should be maintained below 90% and the temperature such that moisture condensation will not form on the surface.
9. Clean all equipment with fresh, clean solvent immediately after use.

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

Shipping Data

Packaging.....	5 and 20 litres in two part units	
resin for 20 L unit.....	16.67 L in 20 L can	
resin for 5 L unit.....	17 L in 5 L can	
cure for 20 L unit.....	3.33 L in 5 L can	
cure for 5 L unit.....	0.83 L in 1 L can	

Shipping weight (approx).....	20 L unit	5 L unit
resin	33 kg	8 kg
cure	4 kg	1 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 application instructions must be observed during all storage, handling, use and drying periods.

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.

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-confirming 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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