



Amercoat 3146 P

Polyamide Cured Epoxy Primer

Formally Steelguard 3146

Product Data/ Application Instructions

- **A fast drying, high build epoxy zinc phosphate primer**
- **Fast curing resulting in reduced times to handling**
- **Rapid overcoating properties**
- **Forms durable coating systems with wide range of intermediates and topcoats**

Typical Uses

Shop applied single coat protective finish for general steelwork in dry internal environments. Also used as an anti-corrosive primer or intermediate coat in protective coating systems operating in various internal and external medium to high corrosive environments. Suitable as a primer for Steelguard FM intumescent systems.

Recommended Systems

With approved topcoats, withstands splash or spillage of water, solvents, chemicals and petroleum products. Suitable topcoats are Amercoat epoxies, polyurethanes such as Amercoat 450 series, acrylics and alkyds.

Typical Systems using Amercoat 3146 P

ISO 12944 classification	First coat	Intermediate	Finish Coat
C4	Amercoat 68 Series	Amercoat 3146P	Amercoat 450 Series
C4/C3	Amercoat 132E	Amercoat 3146P	Amercoat 450 Series
C4/C3	Amercoat 3146P	Amercoat 3146P	Amercoat 450 Series
C3/C2	Amercoat 3146P	-	Amercoat 450 Series
C1	Amercoat 3146P	-	-

Physical Data

Finish	matt	
Colour	oxide red, light grey, dark grey, off white	
Components	2	
Mixing ratio (by volume)		
resin	5 parts	
cure	1 part	
Curing mechanism	solvent release and chemical reaction between components	
Volume solids*	58% +/- 3% (ASTM-D2697, modified)*	
VOC**		
EC SED 1999/13/EC	317 g/kg (446 g/l)	
UK PG6/23(92) Appendix 3	360 g/l	
Dry film thickness	50-150 µm per coat	
Number of coats	1	
Calculated coverage	7.7 m ² /l at 75 µm dft	
Allow for application losses, surface irregularities, etc.		
Specific gravity	1.45 kg/l (mixed product)	
Temperature resistance	dry, continuous 120°C	
Flash points (Closed Cup)	°C	°F
resin	8	46
cure	3	37
Amercoat 18	25	77
Amercoat 12	24	75

* Volume solids is measured in accordance with ASTM D2697 modified. 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 3146P

Application

Amercoat 3146P is a two pack, fast drying epoxy zinc phosphate primer for structural steelwork. To obtain the maximum performance for which Amercoat 3146P 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 Ameron representative.

Surface Preparation

STEEL – Surfaces must firstly be thoroughly cleaned of all contaminants such as dust, dirt, oil, grease and salts, prior to abrasive blast cleaning to ISO 8501-1 Sa 2½ or Steel Structures Painting Council SP-10. NOTE: blast to achieve a 40 to 75 µm profile as determined by *Testex* Tape or similar instrument. Remove abrasive residues and dust from surface. **IMPORTANT** - Apply Amercoat 3146P before degradation of the surface takes place. If oxidation occurs then the steel should be re-prepared. The surface must be dry and free of dust, salts, grease and other contaminants immediately before coating.

Application Equipment

AIRLESS SPRAY - Standard airless spray equipment, having a 28:1 or higher pump ratio and a fluid tip with a 0.38 to 0.43 mm (0.015 to 0.017 inch) orifice at approx. 200 bar pressure.
BRUSH - Application by this method should be limited to small areas only such as repairs.
MIXER - Use power mixer powered by an air motor or an explosion proof electric motor.

Application Data

Substrate steel
Application methods airless spray, brush for small areas
Environmental Conditions (during application and drying)
Air temperature: 5 to 40°C 41 to 104°F
Surface temperature: 5 to 40°C 41 to 104°F

Surface temperature must be at least 3°C/5°F above the dew point to prevent moisture condensation on the surface. Never apply coatings under adverse environmental conditions. Ensure good ventilation when applied in confined areas to assist evaporation and elimination of s.olvents. Minimum temperature for satisfactory cure is 10°C/50°F.

Potlife (at 20°C/68°F) 4 hours

Potlife is dependent on temperature and quantities mixed.

Drying Times (in hours) °C/°F	10/50	20/68	30/86
dry to handle	4	2.5	1.5

Recoating Times (in hour) °C/°F	10/50	20/68	30/86
Minimum	4	2	1
(for epoxies and two pack polyurethanes)			

minimum	24	12	6
(for alkyds and vinyls)			

maximum depends on condition of substrate

NOTE: drying times are dependent on air and steel temperature, applied film thickness, ventilation and other environmental conditions. Times are shorter at higher temperature and longer at lower temperatures. Before overcoating, Amercoat 3146P must be in good condition, free of corrosion products and other contaminants. Extended maximum overcoating intervals are dependent on age and degree of weathering of the Amercoat 3146P, plus the type of topcoat and service conditions of the complete coating system. Consult your Ameron representative for specific recommendations.

Thinner Amercoat 18

Cleaner Amercoat 12

Amercoat 3146P

Application Procedure

Amercoat 3146P is packaged in the proper mixing proportions of resin and cure.

Resin 16.67 l in 20 l can

Cure 3.33 l in 5 l can

1. Flush equipment with recommended cleaner.
2. Stir resin (in the larger container) to an even consistency with a power mixer.
3. Add curing solution 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 6 hours at 20°C/68°F.
4. Thin only if necessary for workability, add up to 5% by volume of thinner.
5. Apply a wet coat in even, 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 130 µm wet film thickness will normally provide 75 µm 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. 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 or shift. When left in spray equipment, Amercoat 3146P will cure and cause clogging.

Shipping Data

Packaging

resin 16.67 l in 20 l can
cure 3.33 l in 5 l can

Shipping weight

resin approx. 34 kg
cure approx. 4 kg

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

Amercoat 3146P

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