

Amerlock 400C

High solids epoxy coating

Product Data/ Application Instructions

- High performance self priming universal epoxy
- High solids, low VOC
- Surface tolerant and abrasion resistant
- Compatible with prepared damp surfaces
- Adheres to most types of existing coating systems
- Available in a wide colour range
- If required Amerlock 400C can be overcoated with a wide range of topcoats
- Also available with MIO pigmentation

Amerlock 400C is used as a high performance maintenance coating with excellent adhesion to a wide range of existing coatings. Amerlock 400C can be applied to mechanically cleaned surfaces. Adhesion is excellent to a wide variety of substrates, including concrete, aluminium and galvanizing. Amerlock 400C has excellent application characteristics. It can be applied by conventional and airless spray equipment, brush or roller. For immersion service in water, abrasive blasting to Sa 2½ is required. However, for enhanced UV resistance it may be topcoated with a wide range of different topcoats. Contact your PPG representative for specific recommendations.

Typical Uses

Specially formulated as a high performance coating 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. Amerlock 400C has good resistance to splash, spillage and fumes of acids, alkalis and solvents.

ISO 12944 -Typical systems using Amerlock 400C

ISO 12944	First coat	Intermediate	Finish coat
C5	Amercoat 68 Series	Amerlock 400C	Amercoat 450S, PSX 700 or Amershield
C4	Amerlock 400C	Amerlock 400C	
C3	Amerlock 400C		
IM 1 / 2	Amerlock 400C		Amerlock 400C

Physical Data

Finish	semi-gloss		
Colour.....	RAL and BS colours*		
MIO versions.....	Light grey RAL 7035 and Grey aluminium RAL 9007		
Components	2		
Mixing ratio (volume).....	1 part resin to 1 part cure		
Curing mechanism	solvent evaporation and chemical reaction between components		
Volume solids.....	87% (ISO 3233)**		
VOC***			
EC SED 1999/13/EC.....	114 g/kg (163 g/l)		
UK PG6/23 (92) Appendix 3	106 g/l (0,9 lbs/gal)		
Dry film thickness	100-200 microns 4-8 mils		
Number of coats	1 or 2		
Theoretical coverage.....	m ² /L	ft ² /gal	
at 100 microns /4 mil dft.....	8.7	358	
Temperature resistance	Dry	Wet	
	°C	°C	°F
Continuous.....	93	200	40
Short term peak temp.	177	350	40
Flashpoints	°C	°F	
Amerlock 400C/400GFA cure	26	79	
Amerlock 2/400 resin	43	109	
Amercoat 65	24	75	
Amercoat 12	24	75	
Thinners	Amercoat 65		
Cleaner.....	Amercoat 12		

* Uniform appearance may require two coats of Amerlock 400C in a light colour on tanks and other large structures over contrasting primers or intermediate coats. Use only a light coloured primer or intermediate coat when one finish coat of Amerlock 400C in a light colour is specified.

** Volume solids is measured in accordance with ISO 3233. Slight variations ±3% may occur due to colour and testing variances.

*** VOC 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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Approvals and Certificates

Systems using Amerlock 400C carry a number of approvals and certifications, such as:

Approved for Aramco specification APCS 26.

Approved by the Bulgarian Ministry of health as a wall and floor coating in the food industry.

Approved by ACQPA, France.

Approved by the Newcastle Occupational Health Agency for the storage of grain.

"0" class fire rating (UK Building Regulations) based on testing according BS 476 parts 6 and 7 (fire propagation and flame spread).

Approved by the UK Navy as a non skid deck coating (mixed with Amercoat 4013 NS additive) according Def Stan 134/1.

Please contact your PPG representative for specific approvals and / or certifications.

Surface Preparation

Coatings 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, Amerlock 400C has been developed.

STEEL- Blast clean to Sa 2½ (ISO-8501-1) or SSPC-SP-10. Amerlock 400C can also be applied over mechanically cleaned surfaces. Remove all loose rust, dirt, oil and grease or other contaminants from the surface. Power tool clean in accordance with St 3 or SSPC-SP3 or hand tool clean in accordance with St 2 or SSPC-SP2, UHPWJ in accordance with WJ2L (SSPC-VIS-4). Amerlock 400C can be applied over damp substrates.

For immersion in water abrasive blasting to SA 2 ½ is required..

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

EXISTING AGED COATINGS - Amerlock 400C may be used over most types of properly cleaned, tightly adhering aged 2 pack coatings. For single pack coatings, extra precautions are necessary. It is always recommended a test patch is applied to ensure long-term capability, as performance will depend on condition of the existing coating such as age, adhesion and film thickness

Application Data

Substrate steel, concrete, masonry block, aluminium, galvanizing or aged existing coatings.

Application method..... Airless or conventional spray, brush or roller.

Brush or roller application may require additional coats to achieve the specified dft.

Mixing ratio (volume) 1 part resin to 1 part cure

Environmental conditions

Air temperature 5-50 °C 41-122 °F
Surface temperature 5-60 °C 41-140 °F

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

Potlife (°C/°F)	40/104	32/90	21/70	10/50
	30 min	1 hr	2 hrs	4 hrs

Drying times at 125µm (°C/°F)	40/104	32/90	21/70	10/50
Dry to touch	1 hr	3 hr	6 hrs	24 hrs
Dry through.....	3 hrs	5 hrs	20 hrs	48 hrs
Fully cured.....	2 days	4 days	7 days	21 days

Recoat or topcoat times at 125 µm (°C/°F)

	40/104	32/90	21/70	10/50
Minimum	3 hrs	4 hrs	16 hrs	48 hrs
Maximum *	extended			

* Amerlock 400C has an extended maximum overcoating time. Surfaces to be overcoated must be clean and dry. Any contamination must be identified and adequately removed. Particular attention must be paid to surfaces that have been exposed to heat and/or sunlight and where chalking may be present. A degree of surface cleaning will be required. Your PPG representative can advise on suitable cleaning methods.

Drying times are dependent on temperature, ventilation and film thickness.

Thinner Amercoat 65

Equipment cleaner Amercoat 12



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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, with a 0.48 mm (0.019 inch) fluid tip or larger.

CONVENTIONAL SPRAY - Industrial equipment, having separate air and fluid pressure regulators, mechanical pot agitator and a moisture and oil trap in the main air supply line are recommended.

BRUSH/ROLLER - Apply evenly, using a clean well-loaded brush or roller. Ensure the coating is not brushed or rolled-out too far. Application by brush or roller will provide approx. 80 microns dft. in a single coat application.

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

Application Procedure

Amerlock 400C is packaged in two components in the proper proportions which must be mixed together before use (20 litre unit):

1. Flush equipment with recommended cleaner before use.
2. Stir both resin component and cure component to an even consistency with a power mixer.
3. Add cure to resin, and continue stirring until homogeneous.
4. For conventional spray, thin only as needed for workability with no more than 10 vol % of recommended thinner. Thinning is normally not needed for airless spray.
5. 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 125 µm (5 mil). Maximum dft per coat should not exceed 250 µm (10 mil) per coat.
7. The application of a wet film thickness of 150 µm (6 mil) will normally provide 125 µm (5 mil) of dry film.
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.
10. 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, Amerlock 400C will cure and cause clogging.

Shipping Data

Packaging

Amerlock 2/400 resin	10 L (2.6 gal) in 20 L can
	2.5 L (0.7 gal) in 5 L can
Amerlock 400C/400GFA cure	10 L (2.6 gal) in 10 L can
	2.5 L (0.7 gal) in 2.5 L can

Shipping weight

	kg	lb
Amerlock 2/400 resin	approx. 17	37
	approx 4.3	9.5
Amerlock 400C/400GFA cure		approx 15
	33	
	approx 3.7	8

Minimum shelf life

Resin and cure	1 year from shipment date 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.

PPG makes no other warranties concerning the product. No other warranties, whether express, implied or statutory, such as warranties of merchantability or fitness particular purpose, shall apply. In no event shall PPG be liable for consequential or incidental damages.

Any recommendations or suggestion relating to the use of the products made by PPG, whether in its technical literature, or response to specific enquiry, or otherwise, is based on data believed to be reliable; however, the products and information are intended for use by Buyer's having requisite skill and know-how in the industry, and therefore it is Buyer to satisfy itself of the suitability of the products for its own particular use and it shall be deemed that Buyer has done so, as its sole discretion and risk. Variation in environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results.

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Due to PPG'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 PPG Protective & Marine Coatings website at www.ppgpmc.com

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.

