



Performance Coatings & Finishes

Amerlock 400C



High solids epoxy coating

(Amerlock Series)

Product Data/ Application Instructions

- High performance self priming universal epoxy
- High solids, low VOC
- Can be applied over mechanically cleaned steel and suitable prepared concrete
- 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

Amerlock 400C can be used as a high performance maintenance coating with excellent adhesion to a wide range of existing coatings. For corroded areas, 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 in seawater, abrasive blasting to Sa 2½ is required. Amerlock 400C is available in a wide variety of colours and therefore does not require a topcoat. If a further topcoat is requested a wide range of different types is available. Contact your Ameron 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, alkalies, solvents, fresh and salt water.

Typical systems using Amerlock 400C

ISO 12944	First coat	Intermediate	Finish coat
C5	Amercoat 68 Series	Amerlock 400C	Amercoat 450 Series
C4	Amerlock 400C Amerlock 400C	Amerlock 400C	Amercoat 450 Series Amershield
C3	Amercoat 68 Series Amerlock 400C		Amerlock 400C Amercoat 450 Series
I 5	Amerlock 400C		Amerlock 400C

Physical Data

Finish	semi-gloss		
Colour.....	RAL and BS colours*		
MIO versions.....	Light gray RAL 7035 and Gray aluminium RAL 9007		
Components	2		
Mixing ratio (volume).....	1 resin to 1 cure		
Curing mechanism	solvent evaporation and reaction between components		
Volume solids.....	87% (ISO 3233)**		
VOC.....	7.8% by weight*		
	106 g/l	0.88 lb/gal	
VOC = Volatile Organic Compounds - U.S. regulations for the reduction of solvent emission.			
Dry film thickness	125 microns		
	5 mils		
Number of coats	1-2*		
Theoretical coverage.....	m ² /L	ft ² /gal	
at 125 microns /5 mil dft.....	7.0	280	
Temperature resistance	Dry	Wet	
	°C	°F	°C
Continuous.....	93	200	40
Short term peak temperature	177	350	40
Flashpoints	°C	°F	
Amerlock 400C/400GFA cure	26	79	
Amerlock 2/400 resin	43	109	
Mixed	36	71	
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.



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Approvals and Certificates

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.

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 - Amerlock 400C can 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. Water blasting in accordance with WJ2L (SSPC-VIS-4). If possible, abrasive blasting is preferred. Amerlock 400C can be applied over damp substrates.

For immersion in seawater abrasive blasting is required. Blast clean to Sa 2½ or SSPC-SP-10 (ISO-8501-1).

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

EXISTING COATINGS - Amerlock 400C may be used over most types of properly cleaned, tightly adhering coatings. In case existing coating system is unknown or based on conventional binders a test patch is recommended.

Application data Amerlock 400C

Substrate steel, concrete, masonry block, aluminium, galvanizing or coated surfaces.

Application method..... Airless or conventional spray.
 Touch-up of small areas can be made by brush or roller.

Brush or roller application may require additional coats.

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

Environmental conditions

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

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

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

Drying times (°C/°F)	32/90	21/70	10/50
Dry to touch	3 hr	6 hrs	24 hrs
Dry through	5 hrs	20 hrs	48 hrs
Fully cured	2 days	7 days	21 days

Recoat or topcoat times (°C/°F)	32/90	21/70	10/50
Minimum time	4 hrs	16 hrs	48 hrs
Maximum time	not limited		

Maximum recoating/topcoating time intervals are dependent on temperature, degree of weathering, type of topcoat, and service conditions of the complete coating system. Consult your Ameron representative for specific recommendations.

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

Thinner Amercoat 65

Equipment cleaner Amercoat 12



Amerlock 400C

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 - A moisture and oil trap in the main air supply line, a pressure material pot with mechanical agitator and separate regulators for air and fluid pressure are recommended.

BRUSH OR ROLLER - Use clean, short-bristled brush or medium nap roller. Application by brush or roller will require at least 2 coats to achieve 125 µm (5 mil) dry film thickness.

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):

Resin	10 l in 20 l can
Cure	10 l in 10 l can
Thinner	Amercoat 65
Cleaner	Amercoat 12

1. Flush equipment with recommended cleaner before use.
2. Stir both resin and cure 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 within potlife. Potlife at 20°C: 2 hours
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. Stir during application to maintain uniformity of material. 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 -when measured- should not exceed 250 µm (10 mil) per coat.
7. The application of a wet film thickness of 144 µm (6 mil) will normally provide 125 µm (5 mil) of dry film. When applied by brush or roller two coats will be necessary to achieve 125 µm (5 mil) 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.
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	
Amerlock 400C/400GFA cure	10 L (2.6 gal) in 13 L can	

Shipping weight	kg	lb
Amerlock 2/400 resin	approx. 17	37
Amerlock 400C/400GFA cure	approx. 15	33

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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Caution

This product is flammable. Keep away from heat and open flame. Keep container closed. Use with adequate ventilation. Avoid prolonged and repeated contact with skin. If used in confined areas, observe the following precautions to prevent hazards of fire or explosion or damage to health:

1. circulate adequate fresh air continuously during application and drying;
2. use fresh air masks and explosion proof equipment;
3. prohibit all flames, sparks, welding and smoking.

Do not empty into drains. Take precautionary measures against static discharges. For specific information on hazardous ingredients, required ventilation, possible consequences of contact, exposure and safety measures see Safety Data Sheet.

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.

Ameron 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 Ameron be liable for consequential or incidental damages.

Any recommendations or suggestion relating to the use of the products made by Ameron, 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.

Limitation of Liability

Ameron's liability on any claim of any kind, including claims based upon Ameron's negligence or strict liability, for any loss or damage arising out of, connected with, or resulting from the use of the products, shall in no case exceed the purchase price allocable to the products or part thereof which give rise to the claim. In no event shall Ameron be liable for consequential or incidental damages.

Condition of Sale

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