



Amerlock 2C

Fast drying surface tolerant VOC compliant epoxy

Amerlock Series

Product Data/ Application Instructions

- **Fast dry, dry to touch in 3 hours**
- **Low temperature curing down to 0°C**
- **Can be recoated after 6 hours**
- **Exceptional corrosion protection in industrial and marine environments**
- **Surface tolerant coating**
- **Self priming topcoat and compatible with most existing coatings**
- **Can be overcoated with a wide range of topcoats**
- **Meets all existing VOC regulations**
- **Also available with MIO**

Amerlock 2C is a high solids epoxy coating used for maintenance of steel and concrete surfaces. Amerlock 2C may be applied directly to bare steel and can also be applied to most types of primers or existing coating systems. Amerlock 's low solvent level reduces the chances for film pinholing and solvent entrapment at the substrate-coating interface, often a major cause of coating failure with conventional epoxies and lower solids systems. Amerlock 2C is available in a variety of colours, and only requires a topcoat for extended weatherability or special uses.

Typical Uses

Amerlock 2C is designed for use in a variety of areas, even those where only limited surface preparation is possible. As a maintenance coating, Amerlock 2C protects steel structures in industrial facilities, bridges, tank exteriors, marine weathering, offshore, oil tanks, piping, roofs, water towers and other exposures. Amerlock 2C has good chemical resistance to splash and spillage, fume and immersion in neutral fresh and salt water.

Outstanding Characteristics

Amerlock 2C can be used as a high performance maintenance coating with excellent adhesion to a wide range of existing coatings. For corroded areas, Amerlock 2C can be applied to mechanically cleaned surfaces. Adhesion is excellent to a wide variety of substrates, including concrete, aluminium and galvanized surfaces. Amerlock 2C has excellent application characteristics. It can be applied by conventional and airless spray equipment, brush or roller. Contact your Ameron representative for specific information.

Physical Data

Finish	semi-gloss
Colour	RAL and BS colours *
MIO version	Light grey (RAL 7035) Grey aluminium (RAL 9007)
Components	2
Mixing ratio (by volume)	
Amerlock 2/400 resin	1 part
Amerlock 2C cure	1 part
Curing mechanism	solvent release and chemical reaction between components
Volume solids	88% (ISO 3233)**
VOC	8% by weight 106 g/l 0.8 lbs/gal
Dry film thickness	100 - 200 µm (4 - 8 mils) per coat
Number of coats	1 - 2
Calculated coverage	8.8 m ² /l (358 ft ² /gal) at 100 µm (4 mils) 4.4 m ² /l (179 ft ² /gal) at 200 µm (8 mils)
Allow for application losses, surface irregularities, etc.	
Thinner	Amercoat 65
Cleaner	Amercoat 12
Specific gravity	1.2 – 1.4 kg/l depending on colour (mixed product)
Flash points (Closed Cup).....	°C °F
Amerlock 2/400 resin	43 109
Amerlock 2C cure	26 79
Amercoat 65	24 75
Amercoat 12	24 75

* Surface discolouration might occur on exposure to outside weathering, UV light, elevated temperatures or chemicals; however, product performance is not affected.

** Volume solids measured in accordance with ISO 3233. Slight variation, circa 3% may occur due to colour and testing variances.

*** Brush or roller application may require additional coats.

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Approvals and Certificates

Complies with USFDA for incidental food contact

Chemical Resistance

Environment suitability of Amerlock 2C

	Splash and Spillage	Fumes and Weathering
Acidic	Fair	Good
Alkaline	Excellent	Excellent
Solvents	Excellent	Excellent
Salt solutions		
Acidic	Good	Very Good
Neutral	Excellent	Excellent
Alkaline	Excellent	Excellent
Water	Excellent	Excellent

This chart is only a guide to show typical resistance of Amerlock 2C. Contact your Ameron representative for your specific requirements.

Topcoating

If a further topcoat is requested a wide range of different types is available. Contact your Ameron representative for specific recommendations.

Surface Preparation

Coating 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 2C can be applied over mechanically cleaned surfaces. All surfaces must be clean, dry and free of all contaminants, including salt deposits.

STEEL, NON-IMMERSION - Amerlock 2C can be applied over mechanically cleaned surfaces. Remove water, salt, dirt, oil, loose rust and all rust scale. Power tool clean in accordance with St 3 or SSPC SP-3 or hand tool clean in accordance with St 2 or SSPC SP-2. Water blasting is also acceptable. For more severe environments, dry, abrasive blast to Sa 2½ or SSPC - SP10.

STEEL, IMMERSION - Remove water, salt, dirt, oil, loose rust and all rust scale. Blast to achieve Sa 2½ or SSPC SP-10.

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

ALUMINUM – Remove oil, grease or soap film with neutral detergent or emulsion cleaner, treat with Alodine® 1200, Alumiprep® or equivalent or blast lightly with fine abrasive.

GALVANIZING – Remove oil or soap film with detergent or emulsion cleaner, then use zinc treatment such as Galvaprep® or equivalent or blast lightly with fine abrasive.

EXISTING COATINGS - Amerlock 2C may be used over most types of properly cleaned, tightly adhering coatings. For use over existing coatings, test patch is recommended.

Application Data

Substrate steel, concrete, galvanizing or tightly adhering existing coatings

Application methods by airless or conventional spray, brush or roller***

Environmental conditions

Air temperature -18° to 50°C 0 - 122°F

Surface temperature -18° to 60°C 0 - 140°F

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

For satisfactory curing speed a surface temperature above 0°C is recommended.

For immersion services Amerlock 2C must have been dried and cured above 5°C (41°F)

Potlife (at 20°C/68°F) 1 hour

Induction time (at 20°C/68°F) NA

Drying Times (hours) (at 125 µm dft), °C/°F

	5/41	10/50	20/68	30/86
dry through.....	24	16	5	3
dry to recoat.....	24	14	6	3

Potlife and drying times are dependent on temperature.

Maximum interval for topcoating depends on coating system to be used. Consult your Ameron representative for specific recommendations.

Systems using Amerlock 2C

1 st coat	2 nd coat	3 rd coat
Amerlock 2C	None	None
Amerlock 2C	Amerlock 2C	None
Amerlock 2C	Amercoat 450 Series	None
Amerlock 2C	Amershield	None
Amerlock 2C	PSX 700	None
Amerlock 2C	PSX 1001	None
Dimetcote 9 series	Amerlock 2C	None
Dimetcote 9 series	Amerlock 2C	Amercoat 450 series

In some cases a mist coat/full coat technique may be required to prevent application bubbling.

Recoat/Topcoat time @ 70°F (21°C)

System	Maximum time
Amerlock 2C/Amerlock 2C	1 month
Amerlock 2C/PSX 700	1 month
Amerlock 2C/Amershield or Amercoat 450 series	1 week
Amerlock 2C/Amercoat 5405	1 week

Note: If maximum time is exceeded, roughen surface.

For topcoats (finish coats) not listed, see Product Data sheet for specific topcoat time imitations.

Maximum recoating/topcoating times 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.

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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, such as Graco Bulldog Hydra or larger with a 0.53 mm (0.021 inch) fluid tip or larger.

CONVENTIONAL SPRAY - Industrial equipment such as De Vilbiss MBC or JGA or Binks 18 or 62 spray gun. 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.

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

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 (5mils) dry film thickness.

Application Procedure

Amerlock 2C is packaged in two components in the proper proportions which must be mixed together before use.

Amerlock 2/400 Resin 10 l in 20 l can

Amerlock 2C Cure 10 l in 10 l can

1. Flush equipment with recommended cleaner before use.
2. Stir both resin and cure 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 temperatures, do not mix more material than will be used within potlife (1 hour at 20°C/68°F).
4. For conventional spray, thin only as needed for workability with no more than 10% by volume 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 100 to 200 µm (4 - 8 mils). Maximum dry film thickness per coat should not exceed 250 µm (10 mils) per coat.
7. The application of a wet film thickness of 115 to 225 µm (4.6 - 9 mils) will normally provide 100 to 200 µm (4 - 8 mils) of dry film. When applied by brush or roller two or more coats will be necessary to achieve recommended 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 2C will cure and cause clogging.

Shipping Data

Packaging

Amerlock 2/400 resin 10 l (2.6 gal) in a 20 l can

Amerlock 2C cure 10 l (2.6 gal) in a 10 l can

Shipping weight

Amerlock 2/400 resin approx. 17 kg

Amerlock 2C cure approx. 15 kg

Shelf life 1 year from shipment date when stored indoors in unopened, original containers at 5 to 40°C (41 - 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 repeated contact with skin. If used in confined areas, observe the following precautions to prevent hazards of fire or explosion or damage to the 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 Material 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 descretion 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.