



AMERON
INTERNATIONAL

Performance Coatings & Finishes

Amercoat® 184

100% solids epoxy

Product Data/ Application Instructions (Marine & Offshore use)

- Solventless
- High-build
- Chemical resistant
- Excellent barrier properties
- Standard airless application

Typical Uses

- Chemical tank lining
- Water tank lining
- Pipe lining and coating
- Repair pitted steel surfaces
- Concrete protection

Amercoat 184 is a solventless, high performance coating that can be applied with standard airless equipment. It is suitable for use as a tank lining for a variety of fuel and clean products for non-reactive chemicals, caustic, salt water, ballast and dry bulk materials.

Amercoat 880 glass flake additive may be added to Amercoat 184 to increase film build, further reinforce mechanical properties. For increased film build in one coat, Amercoat 884 can be added.

Amercoat 184 is an excellent barrier coat, providing long-term resistance to corrosion even under aggressive conditions. It is suitable for immersion in both salt and deionized waters.

Typical Properties

Property	Method	Result
Abrasion	ASTM D 4060, CS-17 1000 gram load, 1000 cycles	180 mg loss
Adhesion	ASTM D 4541	900-1100 psi
Moisture		
Permeability	ASTM E 96	0.74 perms
Tensile Strength	ASTM D 2379	2755 psi
Modulus	ASTM D 2370	225,900 psi
Flexural Strength (Yield Strength)	ASTM D 790	4819 psi
Hardness (Durometer)	ASTM D 2240 (Type D)	79

Physical Data

Finish	Semigloss	
Color	Oxide Red and Mist Gray	
Components	2	
Curing mechanism	Chemical reaction between components	
Volume solids (calculated)	100%	
Dry film thickness per coat with Amercoat 880	8-10 mils (200-250 microns)	
with Amercoat 884 1/2 gal	12-20 mils	
with Amercoat 884 1 gal	15 mils	
	25 mils	
Theoretical coverage	ft ² /gal	m ² /L
1 mil (25 microns)	1604	39.4
8 mils (200 microns)	201	4.9
VOC mixed (EPA 24)	lb/gal	g/L
	0.3	31
Temperature resistance (Dry)	°F	°C
continuous	250	93
Flash point (SETA)		
converter	>212	>100
base	>200	>93
Amercoat 928	117	47
T-10	80	27

Application Data

Applied over	Primed or prepared steel, concrete			
Surface preparation	SSPC-SP10			
steel	ASTM D4259 or 4260			
concrete	Bar-Rust 235, Amercoat 385, 370			
Primer	Airless spray			
Method				
Mixing ratio (by volume)	3 parts base to 1 part converter			
Amercoat 184	2 x 1-gal can 880			
Amercoat 184 - 4 gal mixed	1 x 1/2-gal can 884			
Amercoat 184 - 4 gal mixed	1 x 1-gal can 884			
Pot life (hours)	°F/°C			
	90/32	70/21	50/10	
	1/3	1/2	1 1/2	
Drying time (ASTM D1640) (hours)	°F/°C			
	100/74	90/32	70/21	50/10
touch	5	8	16	30
through	7	12	26	50
Recoat time**				
minimum	5	7	14	27
maximum (days)	2	3	7	14

**Roughen surface if maximum recoat time is exceeded.

Note: To increase film build with one application Amercoat 884 can be added - 1/2 gal can for a 4-gal unit of Amercoat 184 will increase dry film thickness to between 20-30 mils. See Amercoat 884 Product Data Sheet for specific information.

Equipment cleaner Amercoat 928 or T-10

Formerly Devran® 184

Environmental conditions

Temperature	°F	°C
air and surface	40 to 90	4 to 32
material	50 to 90	10 to 32

Surface temperatures must be at least 5°F (3°C) above dew point to prevent condensation.

High Temperature Limitation

After application at surface temperatures of 40°F to 90°F the Amercoat 184 must cure as follows before being exposed to temperatures above 90°F to avoid sagging:

90°F	70°F	60°F	50°F	40°F
4 hrs	6 hrs	8 hrs	10 hrs	24 hrs

When surface temperatures are above 90°F use Amercoat 884 additive to maintain film build. Without the Amercoat 884 additive sagging may occur above 8 mils DFT at a substrate temperature of 120°F.

Chemical Resistance

The following is a representative list of chemicals to which Amercoat 184 may be exposed as a lining. Contact your Ameron representative for recommendations concerning specific requirements.

Alum	Gasoline, unleaded
Aromatic maphtha	Kerosene
10% Ammonium hydroxide	Methyl tertiary butyl ether
Aromatic 100	Mineral oil
n-Butyl acetate	Nonyl phenol
Carbon tetrachloride	Oxygenated salt water
Castor oil	Palm oil
50% Caustic (to 160°F, 71°C)	Salt water
Crude oil (to 120°F, 49°C)	20% Sodium carbonate
Cumene	Triton X-100
Diesel fuel	Water (to 120°F, 49°C)
Diethylene glycol	Xylene
Ethanol	

Systems Using Amercoat 184

1st Coat	2nd Coat
Amercoat 184	
Amercoat 184	Amercoat 184
Amercoat 235, 385, 370	Amercoat 184

Surface Preparation

Coating performance is, in general, proportional to the degree of surface preparation. Prior to coating, the surface must be clean, dry, undamaged and free of all contaminants, including salt deposits. Round off all rough welds and remove all weld spatter.

Steel – Abrasive blast SSPC-SP10. Blast to achieve an anchor profile of 2 to 3 mils (50 to 75 microns) anchor profile as indicated by a Keane-Tator Surface Profile Comparator, Testex Tape or similar device. Remove abrasive residue or dust from surface. Apply Amercoat 184 as soon as possible to keep steel from rusting. If a holding primer is required, Amercoat 235, 385 or 370 may be used.

Note: Apply Amercoat 184 as soon as possible after surface preparation to prevent recontamination. Do not leave blasted steel uncoated overnight. In case of contamination, remove contaminants. Spot blast if needed.

Concrete – Clean concrete surface. Abrasive blast (ASTM D4259) or acid etch (ASTM D4260) to remove all previous coatings, chalk and surface glaze or laitance. Fill small holes or voids in cast concrete wall or overhead surfaces with Nu-Klad 114A filler compound before applying Amercoat 184. Apply Amercoat 184 within 7 days after application of Nu-Klad 114A.

Application Equipment

The following is a guide; suitable equipment from other manufacturers may be used. Changes in pressure and tip size may be needed to achieve the proper spray characteristics.

Airless spray – Standard equipment with a ratio of 45:1, such as Graco King. Pump should be equipped with 3/8 inch internal diameter high pressure spray hose for lengths of less than 50 feet. For length greater than 50 feet, spray hose should be 1/2 inch internal diameter.

When Amercoat 880 is added, the tip size should be 0.027-inch or larger. Tip size when Amercoat 884 is added should be 0.021.

Power mixer – Jiffy Mixer

Brush or Roller – Additional coats may be required to attain proper thickness.

Application Procedure

Amercoat 184 is packaged in the correct proportions of base and converter which must be mixed together before use.

1. Flush equipment with Amercoat 928 cleaner or T-10.
2. Stir both base and converter to an even consistency. Add converter to base mixing until a uniform consistency is achieved. **Do not use thinners.** Never mix more than can be sprayed within pot life time. Unless needed for application, never more than 5% of T-10.
3. Apply a wet coat in even, parallel passes. Overlap each pass 50 percent to avoid bare areas, pinholes or holidays. Cross spray at right angles if necessary.
4. Material temperature must be between 50 and 90°F. Higher temperatures shorten the pot life. Lower temperatures affect sprayability.
5. Ventilate with clean air during application. Maintain air temperature to prevent condensation on coating surface.
6. Check film thickness using a wet film thickness gauge. If films less than 8 mils (200 microns) apply additional material. Maximum dry film thickness when using Amercoat 880 is 25 mils per coat.
7. For immersion service, check for bare areas, pinholes and holidays with a non-destructive wet sponge holiday detector such as Tinker-Razor Model M1 or Model AP/W. Apply additional Amercoat 184 to areas requiring touch-up within maximum recoat time.

Time before service @ 8 mils (days)	°F/°C
with ventilation	90/32 70/21 50/10
immersion**	4 7 14

****Cure at 50°F minimum.**

8. Clean equipment with Amercoat 928 immediately after use.

Repair

Spot abrasive blast to remove all rust, loose paint and other contaminants from damaged areas abraded to bare steel.

Clean and roughen coating surface if recoat time is exceeded. Apply Amercoat 184 as soon as possible after surface is cleaned to prevent contaminants on the surface.

Shipping Data

Packaging converter	1- and 4-gal can 0.25 gal in 1-gal can 1.0 gal in 1-gal can	
base	0.75 gal in 1-gal can 3.0 gal in 5-gal can	
Shipping weight (approx)	lb	kg
1-gal unit converter	2.5	1.1
base	13	5.9
4-gal unit converter	9.3	4.2
base	52.5	23.8
Shelf life when stored indoors at 40 to 100°F (4 to 38°C) cure and resin	1 year from shipment date	

Numerical values are subject to normal manufacturing tolerances, color and testing variances. Allow for application losses and surface irregularities.

The mixed product is nonphotochemically reactive as defined by South Coast Air Quality Management District's Rule 102 or equivalent regulations.

Warranty

Ameron warrants its products to be free from defects in material and workmanship. Ameron's sole obligation and Buyer's exclusive remedy in connection with the products shall be limited, at Ameron's option, to either replacement of products not conforming to this Warranty or credit to Buyer's account in the invoiced amount of the nonconforming 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 nonconformance 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 for a particular purpose, shall apply. In no event shall Ameron be liable for consequential or incidental damages.

Any recommendation or suggestion relating to the use of the products made by Ameron, whether in its technical literature, or in response to specific inquiry, or otherwise, is based on data believed to be reliable; however, the products and information are intended for use by Buyers having requisite skill and know-how in the industry, and therefore it is for 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, at its sole discretion and risk. Variation in environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results.

Safety Precautions

Read each component's material safety data sheet before use. Mixed material has hazards of each component. Safety precautions must be strictly followed during storage, handling and use.

CAUTION – Improper use and handling of this product can be hazardous to health.

Do not use this product without first taking all appropriate safety measures to prevent property damage and injuries. These measures may include, without limitation: implementation of proper ventilation, use of proper lamps, wearing of proper protective clothing and masks, tenting and proper separation of application areas. Consult your supervisor. Proper ventilation and protective measures must be provided during application and drying to keep vapor concentrations within safe limits and to protect against toxic hazards. Necessary safety equipment must be used and ventilation requirements carefully observed, especially in confined or enclosed spaces, such as tank interiors and buildings.

This product is to be used by those knowledgeable about proper application methods. Ameron makes no recommendation about the types of safety measures that may need to be adopted because these depend on application environment and space, of which Ameron is unaware and over which it has no control.

If you do not fully understand these warnings and instructions or if you cannot strictly comply with them, do not use the product.

Note: Consult Code of Federal Regulations Title 29, Labor, parts 1910 and 1915 concerning occupational safety and health standards and regulations, as well as any other applicable federal, state and local regulations on safe practices in coating operations.

This product is for industrial use only. Not for residential use.

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.**



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