



AMERON
INTERNATIONAL

Performance Coatings & Finishes

Amercoat® 395FD

High-solids amine-cured epoxy tank lining

Product Data/ Application Instructions

- High-build epoxy tank lining
- High-solids
- Low VOC

Typical Uses

Industrial – Tank lining for fuel storage or transport. Also suitable for industrial maintenance applications and municipal potable water. Coating for interior of steel fuel tanks, pipelines and hopper cars.

Marine – Ballast tanks; industrial fuel, crude oil tanks and interior areas such as cargo holds.

Amercoat 395FD white, off-white and ivory conform to FDA regulations as lining for contact with dry foods or for potable water tanks.

Qualifications

USDA - Incidental food contact

FDA - Direct food contact

APIRP1631 - Underground Tanks

MSC/COMSCINST 4750-2 Saltwater ballast, sanitation, petroleum cargo

DOD-P-23236 Type I

DOD-P-23236 Type IV

NSF Standard 61* - For use in drinking water (CLD 23);

Amercoat 395FD

- Colors: Ivory, Off White, White, RT-1805 Blue
- Number of Coats: 2-4
- Sequence of Coats: Any combination of listed colors
- Maximum Field Use Dry Film Thickness (in mils): 30
- Maximum Thinner: 12% Thinner 7 by volume
- Recoat / Cure Time: 16 hours / 7 days
- Tanks 1,500 gallons or greater
- Pipes 36 inches in diameter or greater
- Valves 36 inches in diameter or greater

*Certain restrictions do apply

Physical Data

Finish	Matte			
Color	White, off-white, ivory, RT-1805 blue			
Components	2			
Curing mechanism	Solvent release, chemical reaction between components and moisture from atmosphere			
Volume solids (ASTM D2697 modified)	86% ± 3%			
Dry film thickness per coat	3-5 mils (75-125 microns)			
Coats	2			
Total minimum DFT	6-10 mils (150-250 microns)			
DOD-P-23236	8 mils (200 microns)			
Fuel tanks	6 mils (150 microns)			
Potable water and ballast tanks	8 mils (200 microns)			
Theoretical coverage	ft ² /gal	m ² /L		
1 mil (25 microns)	1379	33.8		
4 mils (100 microns)	345	8.5		
VOC	lb/gal	g/L		
mixed	1.81	217		
mixed/thinned (1 ¾ pt/gal)	2.28	273		
Temperature resistance	Wet		Dry	
	°F	°C	°F	°C
continuous	120	49	200	93
Flash point (SETA)	°F		°C	
395FD cure	110		43	
395FD resin	108		42	
Amercoat 65	78		25	
Amercoat 7	102		39	
Amercoat 12	2		-17	



Chemical Resistance

The following is a representative list of chemicals to which Amercoat 395FD may be exposed as a lining. Contact your Ameron representative for recommendations concerning specific requirements.

Aliphatic hydrocarbons	Lube oil
Aromatic 100, 150	Mineral oil
Aviation Gasolines	Oxygenated salt water
Castor oil	Palm oil (to 160°F, 71°C)
40-60% Caustic (140°F, 60°C)	Potable water
Crude oil (to 120°F, 49°C)	Sea water
Diesel fuel	Toluene
Gasoline, unleaded	Water
Jet fuels	Xylene
Kerosene	

Surface Preparation

Coating performance is proportional to the degree of surface preparation. Surface must be clean, dry, undamaged and free of all contaminants prior to coating.

Welds should be continuous with no overlapping steel surfaces or rough edges. Remove all weld spatter.

Steel – Abrasive blast to SSPC-SP10. Blast to achieve an anchor profile of 1 to 2 mils (25 to 50 microns) as determined with a Keane-Tator Surface Profile Comparator, Testex Tape or similar device. Remove abrasive residue or dust from surface.

Apply the first coat of Amercoat 395FD as soon as possible to prevent blasted surfaces from rusting. Surface must be dry and free of contamination. 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 395FD. Apply Amercoat 395FD within 7 days after application of Nu-Klad 114A.

Surfaces previously coated with Amercoat 3207 Shop Primer – Abrasive blast loosened or damaged areas to SSPC-SP10 or tool clean to SSPC-SP11. Intact Amercoat 3207 should be cleaned of all dirt, moisture, grease and other contaminants prior to topcoating with Amercoat 395FD.

Adhere to all application instructions, precautions, conditions and limitations to obtain the maximum performance. For conditions outside the requirements or limitations described, contact your ameron representative.

Environmental Conditions

Temperature	°F	°C
Air	32 to 122	0 to 50
Surface	32 to 140	0 to 60
Material		
optimum workability	70 to 80	21 to 27

Surface temperature must be at least 5°F (3°C) above dew point to prevent condensation during surface preparation and between coats. At freezing temperatures surfaces must be free of ice.

Relative humidity – 40 to 85 percent. Curing mechanism of this product requires moisture for proper and complete cure. If relative humidity is below 40 percent, suitable means should be employed to raise moisture level.

Application Data

Applied over	Prepared steel or concrete			
Surface preparation				
steel	Abrasive blast SSPC-SP10			
concrete	ASTM D4259 or 4260			
Method	Airless or conventional spray			
Mixing ratio (by volume)	4 parts resin to 1 part cure			
Pot life/Induction time	°F/°C			
	90/32	70/21	50/10	32/0
induction time (mins)	15	30	60	60
pot life (hrs)	4	10	24	24

NR = Not Recommended

Environmental conditions		
Temperature	°F	°C
air	32 to 122	0 to 50
surface	32 to 140	0 to 60
material	70 to 80	21 to 27
Relative humidity	40 to 85%	
Surface temperatures must be at least 5°F (3°C) above dew point to prevent condensation during surface preparation and between coats. At freezing temperatures surfaces must be free of ice.		

Drying time (ASTM D1640)(hours)	°F/°C			
	120/49	70/21	50/10	32/0
through	6	14	72	110
recoat				
minimum	8	16	48	96
maximum (weeks)	1	3	5	8

If maximum recoat time exceeded, roughen surface.

Cure for immersion service (days)	°F/°C			
	120/49	70/21	50/10	32/0
	2	7	14	NR

Thinner	Amercoat 65 or 7
<i>Use Amercoat 7 thinner when applying in confined spaces.</i>	
Cleaner	Thinner or Amercoat 12

Application Equipment

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

Airless spray – Standard equipment, having a 30:1 pump ratio or larger, with a 0.019-0.023 inch tip.

Conventional spray – Industrial equipment such as DeVilbiss MBC or JGA or Binks BBR spray gun and a pressure material pot with mechanical agitator. A moisture and oil trap in the main air supply line and separate regulators for air and fluid pressure are recommended.

Power mixer – Such as Jiffy mixer powered by air or explosion-proof electric motor. Normal propeller-type mixing head is satisfactory.

Application Procedure

Amercoat 395FD is packaged in the correct proportions of resin and cure which must be mixed together before use.

1. Flush equipment with thinner or Amercoat 12 before use.
2. Stir each component separately, then add all the cure (clear) to resin (pigmented). Mix together thoroughly, scraping sides and bottom of container. Mixer with an explosion-proof motor is recommended.
3. Allow an induction period per induction time chart.
4. Thin only as required for workability. Up to 20 percent Amercoat 65 per gallon of Amercoat 395FD may be needed depending upon temperature and equipment capabilities.
5. Stir during application to maintain homogeneity.
6. Apply a wet coat in even, parallel passes; overlap 50 percent to avoid holidays, bare areas or pinholes. If required, cross spray at right angles.
7. Recommended dry film thickness per coat is 3 to 5 mils. Do not exceed 7 mils dry film thickness per coat; otherwise, curing will be impaired and performance may be affected.
8. Should puddling or sagging occur due to excessive buildup, brush out evenly over adjacent areas.
9. Allow first coat of Amercoat 395FD to dry in accordance with drying time, and apply second coat following the above procedure.
10. After allowing minimum dry time for Amercoat 395FD system, check film thickness with a nondestructive gauge, such as Mikrotest or Elcometer. If less than specified thickness, apply additional material as needed.

Note: Because of high solids content, film thickness builds rapidly. Check thickness frequently and if too thick use smaller spray gun tip or add more thinner.

11. If a test for film continuity is required, check for bare areas, pinholes or holidays with a nondestructive holiday detector such as Tinker-Razor Model M-1. Apply additional Amercoat 395 to areas requiring touch-up.
12. Clean all equipment with thinner or Amercoat 12 immediately after use.

Drying and Curing

The curing process requires evaporation of solvents, reaction of curing agent with moisture in the air and chemical reaction between the components, and is dependent upon time, temperature, relative humidity and proper ventilation.

To ensure proper cure, relative humidity must be above 40 percent. If film thickness is greater than recommended, a longer drying time is required. At low temperatures, dry film thickness should be in the 3 to 4 mil range for the first coat to achieve good drying properties. However, in no instance should film thickness per coat exceed 7 mils ; otherwise, curing will be impaired. Ventilation with clean air is required between coats and during curing period following final coat.

Repair

For repair of damaged, imperfect or thin areas, additional Amercoat 395FD should be applied in accordance with the above schedule to ensure proper adhesion. If maximum recoat time has been exceeded, roughen surface prior to recoating.

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 and cause fire or explosion.

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 spray mists and 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.

Shipping Data

Packaging unit	1 gal	5 gal
cure	1-qt can	1-gal can
resin	1-gal can	5-gal can
Shipping weight (approx)	lb	kg
1-gal unit		
cure	1.9	0.8
resin	12.6	5.7
5-gal unit		
cure	9.1	4.1
resin	61.3	27.9

Shelf life when stored indoors at 40 to 100°F (4 to 38°C)
1 year from shipment date

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

This mixed product is nonphotochemically reactive as defined by the 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.

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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