



Amercoat 91

Epoxy novolac tank lining

Product Data/ Application Instructions

- High performance tanklining and pipe lining
- Broad spectrum of chemical resistance
- Withstands continuous immersion in deionized water up to 200°F (93°C)
- Withstands continuous immersion in hot concentrated brine up to 160°F (71°C)
- Withstands continuous immersion in hot sour crude up to 300°F (149°C)
- Temperature resistance to 450°F (232°C) on insulated or uninsulated surfaces when mixed with Amercoat 880 glass flake additive

Typical Uses

Amercoat 91 provides excellent protection to prepared steel and concrete exposed to chemical immersion, splash, spillage and fumes. Amercoat 91 is used as a high performance tanklining for roadtankers and storage tanks in the chemical and petrochemical industries.

Amercoat 91 has excellent resistance to continuous and alternating service for a wide range of chemicals, solvents, caustic, crude and fuel oils, as well as, neutral, alkaline and nonoxidizing salt solutions in water. It may be cleaned between cargoes with hot cleaning, up to a butterworth temperature of 180°F (82°C).

Application Instructions

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

Chemical Resistance

For a comprehensive listing of chemical resistance see the latest Amercoat 91 Chemical Resistance List or contact your OAL Representative.

Surface Preparation

Coating performance is, in general, proportional to the degree of surface preparation. All surfaces must be clean, dry and free of all contamination, including salt deposits before applying coating.

Steel – New without pits or depressions – blast SSPC - SP10/NACE No. 2.

Rusted or pitted – blast SSPC - SP5/NACE No. 1.

Blast to achieve a dense, angular 1.5-mil (37.6-micron) minimum profile as determined with a Keane-Tator Surface Profile Comparator, Testex Tape or similar device. Remove abrasive residue or dust from surface.

Apply Amercoat 91 as soon as possible to prevent re-rusting. Keep moisture, oil, grease or other organic matter off surface before coating. Spot blast to remove any contamination. Solvent wiping is not adequate.

Concrete – Clean concrete and masonry surfaces; abrasive blast (ASTM D4259) or acid etch (ASTM D4260). Fill small holes or voids with Amercoat® 114A before applying Amercoat 91.

Physical Data

Finish	Low gloss			
Color	Light buff, white			
Components	2			
Curing mechanism	Solvent release and chemical reaction between components			
Volume solids (calculated)	54% ± 3%			
Dry film thickness per coat	5 - 6 mils (125 - 150 microns)			
Coats	2 or 3			
Theoretical coverage	ft ² /gal		m ² /L	
1 mil (25 microns)	867		21.2	
VOC (calculated)	lb/gal		g/L	
mixed	3.42		410	
mixed/thinned (2 oz./gal.)	3.50		420	
Temperature resistance	Wet		Dry*	
	°F	°C	°F	°C
continuous	200	93	400	204
with 880 (1/2 gal can 880/gal)				
continuous	—	—	425	218
intermittent	—	—	450	232

* At temperatures above 200°F, total dry film thickness must not exceed 10 mils in two coats. (One coat when used with 880). Darkening and discoloration of the coating will occur, however film integrity remains unaffected. Product should not be heated at a rate exceeding 20°F per minute at temperatures above 200°F or 30°F per minute below 200°F.

Flash point (SETA)	°F	°C
resin	87	31
cure	200	93
Amercoat 65	78	25
Amercoat 923	102	39
Amercoat 12	2	-17

Application Data

Applied over	Prepared steel or concrete	
Surface preparation	SSPC - SP5 or 10	
steel	ASTM D4259 or 4260	
concrete	Airless or conventional spray	
Method	7.3 parts resin to 1 part cure	
Mixing ratio (by volume)	Allow 15 minutes before application	
Induction time		
Pot life (hours)	°F/°C	
	70/21	
	6	

Environmental conditions		
Temperature	°F	°C
air	50 to 100	10 to 43
surface	50 to 120	10 to 49

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

Dry time (hours)	75°F/24°C
touch	1
recoat, min	16
recoat, max (days)	90

Drying times are dependent on air and surface temperatures as well as film thickness, ventilation and relative humidity. Maximum recoating time is highly dependent upon actual surface temperatures - not simply ambient air temperatures. Surface temperatures should be monitored, especially with sun-exposed or otherwise heated surfaces. Higher surface temperatures shorten the maximum recoat window.

for immersion (days)	7
Thinner	Amercoat 65 or 923
Equipment 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, such as Graco Bulldog Hydra-Spray, or larger, with a 0.017- to 0.023-inch orifice.

Conventional spray - Industrial equipment, such as DeVilbiss MBC or JGA spray gun, and a pressure material pot. A moisture and oil trap in the main air supply and separate regulators for air and fluid pressure are required.

Power mixer – Jiffy mixer powered by an air or explosion-proof electric motor.

Application Procedure

1. Flush all equipment with thinner or Amercoat 12 cleaner before use.
2. Stir resin component thoroughly, then add cure to resin and mix until uniform. Amercoat 91 is packaged in the proper mixing proportions of resin and cure. Do not mix more material than will be used within pot life time. Induction time is 15 minutes at 70°F (21°C).
3. If necessary for workability, use up to 2 fluid ounces of thinner per gallon of Amercoat 91 for airless or conventional equipment.
4. When applying by conventional spray, use adequate air pressure and volume to ensure proper atomization.
5. Apply a wet coat in even parallel passes; overlap 50 percent to avoid holidays, bare areas and pinholes and to achieve a dry film thickness of 5 - 6 mils (125 - 150 microns).
6. Check dry film thickness using nondestructive dry film thickness gauge such as Mikrotest or Elcometer. If less than the specified thickness, apply additional material. Total dry film thickness must not exceed 14 mils (350 microns) in 2 coats, and must not be less than 8 mils (200 microns).
7. When a pinhole-free coating is required, check continuity of dry but uncured coating with a nondestructive holiday detector such as Tinker-Razor Model M-I. Apply additional coats to areas requiring touch-up.
8. After use, clean equipment immediately with thinner or Amercoat 12.

Shipping Data

Packaging units	20 ltr Kit
resin	17.6 ltrs in 20 ltr can
cure	2.4 ltrs in 20 ltr can

Shipping weight (approx)	KG
20 ltr Kit	29.35
resin	26.75
cure	2.60

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. See application instructions for complete information and safety precautions.

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

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 solvent 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. OAL makes no recommendation about the types of safety measures that may need to be adopted because these depend on application and space, of which OAL is unaware and over which it has no control.

If you do not fully understand the 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.

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