



Amercoat 351

Solvent Free Epoxy

Product Data/ Application Instructions

- **High build epoxy, 100% solids content**
- **Excellent resistance to (hot) water**
- **Excellent barrier properties**
- **Standard airless application**
- **Easily cleaned, abrasion resistant**
- **Does not require high temperatures for curing**

Typical Uses

Amercoat 351 is a solvent free high performance coating that can be applied with standard airless equipment. It is suitable for use as a tank lining for potable water, salt water, ballast and dry bulk materials.

Amercoat 351 can be used in both marine and industrial environments such as ships tanks, ballast tanks, tank cars and railroad tanks. The abrasion resistance of Amercoat 351 allows it to be used as a lining for slurries, or as a coating for concrete in high wear services.

Amercoat 351 is an excellent barrier coat, providing longterm resistance to corrosion even under aggressive conditions. It is suitable for immersion in both salt and deionised waters at temperatures up to 60°C/140°F.

Note: For use on concrete surfaces, Nu-Klad 114A surfacer may be required. Obtain specific recommendations from your Ameron representative.

Approvals and Certificates

Complies with the Shell requirements for the storage of aviation fuel A1 (tested at TNO, the Netherlands).

Approved by the Bulgarian Ministry of Health as a wall and floor coating in the food industry.

Complies with the German KTW recommendations for potable water (composition and migration tests for tanks, armatures, fittings and equipment, gaskets D1 and D2).

Approved by the Folkehelsa (Norway) as tanklining for potable water on offshore installations and ships under Norwegian flag.

UK WRAS potable water approval for cold and hot water (60°C/140°F) use (tested according to BS6920:2000).

Physical Data

Finish	semi-gloss
Colour	ivory, grey
Components	2
Mixing ratio (by volume)	
resin	3 parts
cure	1 part
Curing mechanism	chemical reaction between components
Dry film thickness	300 µm per coat *
with Amercoat 351 thixotropic powder (0.15 kg)	500 - 1000 µm
Number of coats	1 or 2
Volume solids	100%
VOC	0
Calculated coverage	3.3 m ² /l at 300 µm
Allow for application losses, surface irregularities, etc.	
Specific gravity	1.41 kg/l (mixed product)
Flash points (Closed Cup).....	°C °F
resin	70 158
cure	175 347
Amercoat 12	24 75

* For increased film build up to 1.0 mm dft per coat at steel temperatures of 15 - 35°C (59-95°F), Amercoat 351 thixotropic powder can be added. Lower film build will be achieved at steel temperatures in excess of 35°C/95°F. At steel temperatures above 35°C/95°F, Amercoat 351 thixotropic powder must be added to prevent sagging.

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Surface Preparation

STEEL - Dry abrasive blast to Swedish Standard Sa 3 SIS 05 5900 - 1967, ISO 8501-1 or Steel Structures Painting Council SP-5. Surface must be free of moisture, grease and other contaminants. Apply Amercoat 351 as soon as possible to keep steel from rusting. Obtain a minimum anchor profile of 50 µm.

CONCRETE - Light abrasive blasting is best to remove all previous coatings, chalk and surface glaze or laitance. After blasting, small holes or voids in cast concrete wall or overhead surfaces should be filled with a suitable material such as Nu-Klad 114A epoxy filler compound before applying Amercoat 351.

IMPORTANT - Apply Amercoat 351 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.

Application Equipment

The following equipment is listed as a guide and suitable equipment from other manufacturers may be used.

Adjustments of pressure and change of tip size may be needed to obtain the proper spray characteristics.

AIRLESS SPRAY - Amercoat 351 is a solvent-free epoxy coating which is applied by a single* or plural component airless equipment, using a 0.63 mm (0.025 inch) reverse tip, or larger. Pump should be equipped with 3/8" internal diameter high pressure spray hose to improve spray characteristics, the use of an in-line heater is recommended.

* *pump ratio of 45 : 1 or higher*

MIXER - Use power mixer, such as "Jiffy Mud and Resin Mixer" (as supplied by Goldblatt), powered by an air motor or an explosion proof electric motor. Optimum material temperatures are between 20 and 25°C (68 and 77°F). At lower temperatures spray properties are affected, at higher temperatures the working time decreases. If material has been stored below 20°C/68°F, warm to minimum 20°C/68°F before mixing.

Application Data Summary

Like all high performance coatings, Amercoat 351 must be applied as recommended to obtain the maximum performance. If conditions exist that are not within the requirements or limitations described, consult your Ameron representative.

Repair

Damaged areas abraded to bare steel: Remove all rust, loose paint, grease or other contaminants preferably by spot abrasive blasting. Where abrasive blasting is not possible, disc sand using No. 16 open coat paper. Feather edges of surrounding intact coating.

Too thin areas: Remove contaminants and if required roughen surface and apply Amercoat 351 as soon as possible after surface is cleaned to prevent contaminants on the surface.

Application Data

Substrate steel and concrete

Application methods airless spray

Environmental Conditions (during application, drying and curing)

Air temperature: 15 to 40°C 59 to 284°F

Surface temperature: 15 to 40°C 59 to 284°F

- A. In moderate climates, with steel temperatures between 15 to 35°C (59 to 95°F) one coat of Amercoat 351 normally provides a dry film thickness of 300 µm up to 500 µm. Amercoat 351 thixotropic powder additive (0.15 kg) can be added to Amercoat 351 to increase film build up to 1.0 mm per coat. Amercoat 351 thixotropic powder should be mixed thoroughly with the CURE component of Amercoat 351 before combining and mixing it with the RESIN.
- B. In hot climates with elevated substrate temperatures Amercoat 351 thixotropic powder additive (0.15 kg) should be added to improve the sag resistance of Amercoat 351 and to reach a dry film thickness of 300 - 1000 µm per coat.

To prevent moisture condensation during application, surface temperature must be at least 3°C/5°F above dew point. Never apply coatings under adverse environmental conditions. Ensure good ventilation when applied in confined areas.

Drying Times (in hours, °C/°F)	10/50	20/68	30/86
dry to touch	16	10	8
dry through	60	18	12

Recoating Times (in days)			
maximum	10	7	5
before immersion service	14	7	4

NOTE: drying times are dependent on air and steel temperature, applied film thickness, ventilation and other environmental conditions. Times are proportionally shorter at higher temperature and longer at lower temperatures. Prior to recoating ensure the surface is clean. Maximum recoating time depends on coating system to be used. Consult your Ameron representative for specific recommendations.

Potlife (at 20°C/68°F) 1 hour

Potlife and drying times are dependent on temperature and quantities mixed.

Induction time not applicable

Thinner not applicable

Cleaner Amercoat 12

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Application Procedure

Amercoat 351 is packaged in two component in the proper proportions:

Resin 7½ l in 10 can
Cure 2½ l in 2½ l can

1. Flush equipment with recommended cleaner.
 2. Stir both resin and cure to an even consistency with a power mixer. Add cure to resin and continue mixing until a uniform consistency is achieved.
 3. Apply in a wet coat in even parallel passes. Overlap each pass 50% to avoid bare areas, pinholes or holidays.
 4. Higher temperatures shorten the potlife. Lower temperatures affect sprayability.
 5. Ventilation with clean air is required during application. Before recoating and curing to dry film, no condensation is allowed.
 6. Check film thickness using a wet film thickness gauge. If less than 275 µm, apply additional material. Total dry film thickness must not exceed 500 µm, unless Amercoat 351 thixotropic powder additive is used.
 7. Do not thin for any reason!!
 8. For immersion service, check for bare areas, pinholes and holidays with a non-destructive wet sponge holiday detector of less than 100 Volts, such as Tinker and Razor Model M1. Apply additional Amercoat 351 to areas requiring touch-up.
 9. Potlife is 1 hour at 20°C/68°F. Due to potlife limitations, cleaning of equipment must start as soon as possible after application is completed. Never mix more material than can be sprayed in 30 minutes.
- # Note that in hot climates for single component airless the material temperature should be 20 to 25°C (68 to 77°F) prior to mixing otherwise potlife becomes very short. Residues of mixed material can develop very high temperatures and must be discarded to avoid excessive heat build up in the can (e.g. by pouring out in thin layers).

Shipping Data

Packaging

resin 7½ l in 10 l can
cure 2½ in 2½ l can

Shipping weight

resin approx. 12.6 kg
cure approx. 2.9 kg

Shelf life..... 6 months from shipment date when stored indoors in unopened, original containers at 5 to 40°C (41 to 104°F).

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Caution

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 Product Data/Application Instruction and Material Safety Data Sheet must be observed during all storage, handling, use and drying periods.

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-conforming 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.

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In no event shall Ameron be liable for consequential or incidental damages.

Due to Ameron's policy of continuous product improvement, the information contained in this Product Data/Application Instructions sheet is subject to change without notice. It is the Buyer's responsibility to check that this issue is current prior to using the product. For the most up-to-date Product Data/Application Instructions always refer to the Ameron Performance Coatings & Finishes website at www.amerondirect.co.uk

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.

Condition of Sale

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