



Amercoat 391PC

Solvent Free Epoxy

Product Data/ Application Instructions

- Provides corrosion resistance
- Excellent adhesion on steel and concrete surfaces
- Environmental friendly, high build, 100% solids epoxy coating
- Excellent resistance to petrol, crude oil, natural gas, (hot) water and other chemicals
- Easy one-coat application
- Excellent abrasion resistance

Typical Uses

Amercoat 391PC is a solvent free, high performance coating suitable as a lining for water and crude oil tanks. It is also used as an external coating for underground LPG tanks. The abrasion resistance of Amercoat 391PC allows it to be used as a lining for slurries, or as a coating for concrete in high wear services. Amercoat 391PC 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. Amercoat 391PC is used in the chemical industry, refineries, waste water plants and in the offshore industry.

Note: for use on concrete surfaces, obtain specific recommendations from your Ameron representative.

Approvals and Certificates

This coating combines chemical and mechanical resistance with superior corrosion protection. It has been successfully tested by the MPA in Hannover (Germany) according to **NEN 6905** and **DIN 4681, part 3**, for buried structures. UK WRAS potable water approval for cold water use (tested according to BS6920:2000).

Physical Data

Finish	high gloss
Colour	grey
Components	2
Mixing ratio (by volume)	
resin	2 parts
cure	1 parts
Curing mechanism	chemical reaction between components
Volume solids	100%
VOC	0
Dry film thickness	400 - 1000 µm
Number of coats	1
Calculated coverage	2½ m²/l at 400 µm
.....	1 m²/l at 1000 µm
Allow for application losses, surface irregularities, etc.	
Specific gravity	1.5 kg/l
Flash points (Closed Cup).....	°C °F
resin	> 100 212
cure	> 100 212
Amercoat 12	> 24 75

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Application Data Summary

Amercoat 391PC is a fast dry solvent free epoxy coating developed as a highly resistant coating protecting the interiors and exteriors of pipelines and tanks. For the interior use it provides excellent resistance to oils, fuel and industrial water or sewage. As exterior protection the product has excellent impact and abrasion resistance. It also has excellent resistance to cathodic disbondment. To obtain the maximum performance for which Amercoat 391PC is formulated, strict adherence to all application instructions, precautions, conditions and limitations is necessary. If conditions exist that are not within the requirements or limitations described, consult your Ameron representative.

Surface Preparation

Coating performance is in general, 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 - NON IMMERSION: remove all loose rust, dirt, grease or other contaminants by one of the following depending on the degree of cleanliness required. Swedish Standard Sa 2½ SIS 05 5900 - 1967, ISO 8501-1 blasting is also acceptable.

STEEL - IMMERSION: for more severe service and immersion, clean to Sa 3, ISO 8501-1. The choice of surface preparation with depend on the system selected and end-use service conditions.

NOTE: Blast to achieve a minimum of 50 µm as determined with *Testex Tape* or similar instrument. Remove abrasive residues and dust from surface. Increase coating thickness if profile is greater than 75 µm.

IMPORTANT - Apply Amercoat 391PC as soon as possible after surface preparation to prevent any contamination. Do not leave blasted steel uncoated overnight. In case of contamination, remove contaminants. Spot blast steel if needed.

REPAIR: Prepare damaged areas to original surface preparation specifications, feathering edges of intact coating. Thoroughly remove dust or abrasive residue before touch up.

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.

Application Data

Substrate steel and concrete
Application methods heated two-component metering
airless spray

Environmental conditions (during application and drying)

Air temperature	5 to 50°C	41 to 122°F
Surface temperature	5 to 60°C	41 to 140°F
Material temperature.....	50 to 65°C	122 to 149°F

Minimum temperature to obtain satisfactory cure is 10°C/50°F. Surface temperature must be at least 3°C/5°F above the dew point to prevent moisture condensation on the surface. Never apply coatings under adverse environmental conditions.

Potlife" (at 60°C/140°F) 5 minutes

Drying times (in hours) °C/°F 10/50 20/68 30/86

dry to touch..... 3 2 1

dry through 8 5 3

dry to recoat (maximum) 24 16 8

Time before service

(at 400 - 1000 µm) °C / °F ...	10/50	20/68	30/86
non-immersion (hours).....	24	12	6
immersion		1 week	

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

Thinner not recommended

Cleaner..... Amercoat 12

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AIRLESS SPRAY - Amercoat 391PC is normally applied by 2-component metering mixing and spraying equipment such as a Graco variable ratio Hydra-Cat airless unit, calibrated periodically against full back pressure. The resin to cure ratio, must be 2:1 by volume. Both components should be heated to approximately 50-65°C (122-149°F). Use 0.50 to 0.88 mm (0.019-0.035 inch) tip sizes. Material pressure must be 150 to 200 bars.

NOTE: Airless spray equipment with a fixed 2:1 volume ratio is also acceptable. Also in this case the mixing ratio should be controlled, and material feed pumps should be operating at similar pressures. For pipe coating plural component guns with airless nozzle as well as air driven turbo-bell units may be used.

MIXER - Use a power mixer to homogenise the resin and the cure before circulating through plural component spray unit.

Application Procedure

Amercoat 391PC is packaged in completely filled cans as follows:

resin: 20 l in 20 l can
cure: 20 l in 20 l can

1. Flush equipment with recommended cleaner before use.
2. Heat resin and cure components separately to 50-60°C (122-140°F) and place in pressure pots or under supply pumps. **DO NOT USE ANY THINNER.**
3. Adjust equipment to provide 2:1 mixing ratio for resin to cure in volume ratio.
4. Apply a heavy, wet coat in even, parallel passes. Overlap each pass 50% to avoid bare areas, pinholes or holidays. Immediately follow with additional cross-spray passes to obtain a continuous film without bare spots, pinholes or holidays and to build-up thickness to the specified range.
5. Wet film thickness will be identical to ultimate dry film thickness. Smooth substrates can receive a minimum of 400 µm. Recommended or specified minimum film thickness will depend on product use or specified coating standard.
6. 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.
8. Plural component equipment does not normally require complete cleaning. If necessary clean separate components with no other than Amercoat 12 cleaner.

NOTE: Amercoat 391PC when mixed and held in containers over 0.5 litre reacts rapidly, solidifying while generating excessive heat. Once applied to the substrate at recommended thickness, curing takes place at normal rates.

Shipping Data

Packaging	
resin	20 l in 20 l can
cure	20 l in 20 l can
Shipping weight	
resin	approx. 32 kg
cure	approx. 30 kg
Shelf life	1 year from shipment when stored indoors in unopened, original containers at 5 to 40°C (41-104°F).

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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-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.

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.

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