



Amercoat 440HS

Acrylic Epoxy

(Formerly Steelguard 3850)

Product Data/ Application Instructions

- **Isocyanate-free topcoat**
- **Outstanding weather resistance with excellent colour and gloss retention**
- **Resistant to a broad range of corrosive and marine atmospheres**
- **Resists soil pick up - easily cleanable**
- **Hard, tough, flexible, and abrasion resistant**
- **Cures through a wide temperature range**

Typical Uses

As a non-isocyanate containing finish coat where an attractive appearance is required for offshore platforms, bridges, chemical plants, pulp and paper mills, petroleum refineries, marine equipment, ship topsides and other equipment. Amercoat 440 HS is an acrylic epoxy coating, which has excellent resistance to ultra violet exposure as well as chemical, industrial and marine environments. Amercoat 440 HS is normally applied over Amercoat 370, 383HS, 385 or Amerlock 400C and Amerlock 2C epoxy intermediate coatings. Consult your Ameron representative for specific overcoating intervals.

Chemical Resistance Guide

(applied over suitable primer or intermediate coat)

Environment	Splash and spillage	Fumes and weathering
Acidic	Yes	Yes
Alkaline	Yes	Yes
Solvents	Yes	Yes
Salt solutions		
Acidic	Yes	Yes
Neutral	Yes	Yes
Alkaline	Yes	Yes
Water	Yes	Yes

This chart is only a guide to show typical resistances of Amercoat 440 HS. Your Ameron representative will help you evaluate your particular corrosion protection needs and make the correct recommendation for your specific requirements. Amercoat 440 HS is not recommended for immersion service.

Approvals

Amercoat 440HS is approved and registered to Network Rail RT98 specification item 7.3.2.

Physical Data

Finish	440 HS gloss
Colour	RAL and BS colours
Components	2
Mixing ratio (by volume)	
resin	10 parts
cure	1 part
Curing mechanism	solvent evaporation and reaction between components
Dry film thickness	50-100 µm per coat
Number of coats	1*
Volume solids	57 % (ASTM D2697 modified)**
VOC	27% by weight / 400 g/l
Calculated coverage	11.4 m ² /l at 50 µm 5.7 m ² /l at 100 µm

Allow for application losses, surface irregularities, etc.

Specific gravity approx 1.5 (mixed product,
depending on colour)

Flash points (Closed Cup).....	°C	°F
resin	35	95
cure	54	129
Amercoat 920	24	75
Amercoat 12	24	75

* On tanks and other large structures previously coated with contrasting primer or intermediate coats, uniform appearance may require two coats of Amercoat 440 HS. Use only a light coloured primer or intermediate coat when only one finish coat of Amercoat 440 HS in a light colour is specified.

** Volume solids is measured in accordance with ASTM D2697, modified. Slide variations ±3%, may occur due to colour and testing variances.

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Repair

For repair, or application of additional thickness, Amercoat 440 HS may be overcoated with itself. Ensure surface is clean prior to application.

Surface Preparation

STEEL - Prepare surface in accordance with application instructions for the specific primer used. Be sure surface is clean and dry when Amercoat 440 HS is applied.

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 - Standard airless spray equipment, such as Graco, DeVilbiss, Nordson-Bede, Spee-Flo or others having a fluid tip with a 0.38 to 0.43 mm (0.015 to 0.017 inch) orifice.

CONVENTIONAL SPRAY - Industrial equipment such as DeVilbiss MBC or JGA gun with 78 or 765 air cap and "E" fluid tip and heavy mastic spring or Binks No. 18 or 62 with a 66 x 63 PB nozzle setup. Separate air and fluid pressure regulators, mechanical pot agitator and a moisture and oil trap in the main air supply line are recommended.

MIXER - Use power mixer powered by an air motor or an explosion proof electric motor.

Application Data Summary

Like all high performance coatings, Amercoat 440 HS must be applied as recommended to obtain the maximum performance. To obtain the maximum performance for which Amercoat 440 HS 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.

Application Data

Substrate	suitably primed steel and primed concrete	
Application	airless or conventional spray, brush or roller*	
Environmental Conditions (during application)		
Air temperature:	5 to 40°C	41 to 104°F
Surface temperature:	5 to 40°C	41 to 104°F

Surface must be dry. To prevent moisture condensation during application, surface temperature must be at least 3°C/5°F above dew point.

Note: At application temperatures below 10°C/50°F, additional thinner may be required to obtain uniform appearance and multiple coats maybe required to obtain recommended dry film thickness.

Potlife (at 20°C/68°F) 7 hours

Drying Times	°C/°F	°C/°F
Temperature	10/50	20/68 at 50 µm dft
dry to touch	2 hours	1 hour
dry through	7 hours	5 hours
fully cured	14 days	10 days
Recoating time	2 hours	1 hour
(minimum)		
Recoating time	No maximum overcoating time with itself	

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

Thinner

Amercoat 920

Cleaner

Amercoat 12

* Brush or roller application may require additional coats.

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Application Procedure

Amercoat 440 HS is packaged in the proper mixing proportions of resin and cure which must be mixed together before use.

Resin 4.55 l in 5 l can
Cure .45 l in 1 l can
Thinner Amercoat 911.
Potlife 7 hours

1. Flush equipment with recommended cleaner before use.
2. Stir both resin and cure to a uniform consistency with a power mixer.
3. Add cure to resin, and continue stirring for 5 minutes. NOTE: Since the potlife is limited and shortened by high temperatures, do not mix more material than will be used within the pot life at the specified temperature.
4. For spray application, thin only as needed for workability with no more than 10 vol % of recommended thinner. For application at temperatures below 10°C/50°F, more thinner may be required to ensure proper atomising.
NOTE: For brushing and rolling, normally no thinning is required.
5. Apply a wet coat in even, parallel passes. Overlap each pass 50% to avoid bare areas, pinholes or holidays.
6. Double coat all welds, rough spots, sharp edges and corners, rivets, bolts, etc.
7. Application at 90 µm wet film thickness will normally provide 50 µm dry film.
8. 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.
9. Small damaged or bare areas and random pinholes or holidays can be touched up by brush. Repair larger areas by spray.
10. In confined areas ventilate with clean air during application and drying until all solvents are removed. Temperature and humidity of ventilating air must be such that moisture condensation will not form on surface.
11. Clean all equipment with recommended cleaner immediately after use or at least at the end of each working day or shift. When left in spray equipment, Amercoat 440 HS will cure and cause clogging.

Shipping Data

Packaging
resin 4.55 l in 5 l can
cure45 l in 1 l can

Shipping weight
resin approx. 8 kg
cure approx. 1 kg

Shelf life: 1 year from shipment date when stored indoors in unopened, original containers at 5 to 40°C (41 to 104°F).

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Caution

This product is flammable. 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 the 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.

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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.

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