



Performance Coatings & Finishes

Amercoat® 450HSG



Semi-gloss aliphatic polyurethane topcoat

(450 SG Series)

Product Data/ Application Instructions

- Semi-gloss topcoat with unlimited recoatability
- Outstanding weather resistance with excellent color and gloss retention
- Low VOC
- Resistant to a broad range of corrosive atmospheres
- Resists soil pickup – cleans easily
- Cures through wide temperature range
- Hard, flexible and abrasion resistant

Typical Uses

Amercoat 450HSG can be used as a finish coat where attractive appearance and a wide range of corrosive resistance is required.

- Chemical plants
- Pulp and paper mills
- Off shore platforms
- Petroleum refineries, tanks, gas stations
- General industrial and marine applications

Typical Systems

1st Coat	2nd Coat	3rd Coat
Amercoat 385	Amercoat 450HSG	—
Amerlock 400	Amercoat 450HSG	—
Dimetcote 9 Series	Amercoat 370, Amercoat 383H, Amercoat 385, Amercoat 399	Amercoat 450HSG
Amercoat 68HS	Amercoat 383H, Amercoat 399, Amercoat 385, Amerlock 400	Amercoat 450HSG

Physical Data

Finish	Semi-gloss	
Color*	See color card	
Components	2	
Mixing ratio (by volume)	4 parts resin to 1 part cure	
Curing mechanism	Solvent release and chemical reaction between components	
Volume Solids	65% ± 3%	
VOC (EPA Method 24)	lb/gal	g/L
unthinned	2.2	264
thinned (1pt/gal)	2.8	340
Dry film thickness (per coat)	2-3 mils (50-75 microns)	
Coats	1 or 2	
Theoretical coverage	ft ² /gal	m ² /L
1 mil	1043	26
2 mils	521	13
Temperature resistance, dry	°F	°C
continuous	200	93
intermittent	250	121
Flash Point	°F	°C
cure	89	31
resin	98	37
mixed	92	33
Amercoat 65	78	26
Amercoat 101	145	63
Amercoat 12	2	-17
Thinners	Amercoat 65, Amercoat 101	
Cleaner	Amercoat 12	

*Certain colors (especially yellow, red and orange) may require additional coats to achieve adequate hiding, particularly when applied over dark or contrasting primer color. Color variance with rapid response tinted colors may be greater than with standard production batches. If color is critical, change batches at natural breaks in structure or intermix batches for consistency.

Yellow, red and orange colors will fade faster than other colors due to the replacement of lead-based pigments with lead-free pigments in these colors.

Chemical Resistance Guide

When applied over suitable primer or intermediate coat:

Environment	Splash and Spillage	Fumes and Weather
Acidic	VG	E
Alkaline	VG	E
Solvents	G	E
Salt solutions		
Acidic	E	E
Neutral	E	E
Alkaline	E	E
Water	E	E
G-Good	VG-Very Good	E-Excellent

This table is only a guide. For specific recommendations, contact your Ameron representative for your particular corrosion protection needs. Amercoat 450HSG is not recommended for immersion service.

Surface Preparation

Coating performance, in general, is proportional to the degree of surface preparation. Refer to application instructions for specific primers and intermediate coats being used for application and curing procedures. All previous coats must be clean and dry. Adhere to all minimum and maximum topcoat times for specific primers and intermediate coats. Aged epoxy coatings must be roughened before applying Amercoat 450HSG.

Application Data

Substrates Prepared and primed steel, concrete, aluminum, galvanizing, or aged coatings.*

*A test patch is recommended over aged coatings to determine the compatibility of Amercoat 450HSG with the existing coating. Some coatings may tend to soften and disbond.

Surface preparation: Refer to Product Data Sheet/ Application Instructions of specific primer or intermediate coat being used.

Method Airless or conventional spray, roller, brush (touch-up only)

Mixing ratio (by volume) 4 parts resin to 1 part cure

Environmental conditions
air and surface temp °F °C
20 to 120 -7 to 49

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

Pot life (hours)

	F°/C°		
	90/32	70/21	50/10
	2	4	6

Dry times

	F°/C°		
	90/32	70/21	50/10
touch (hours)	1	2	4
hard (hours)	4	12	24
through	6	18	36
with 866M accelerator			
touch	0.75	1½	3
hard	2	5	10
through	3	8	18

Recoat times

	F°/C°		
	90/32	70/21	50/10
minimum (hours)	2	4	12
with 866M accelerator	1	2	6
maximum	Unlimited*		

*Surface must be dry and free of all contaminants.

Thinner Amercoat 65 or 101

Equipment cleaner Amercoat 12

Application Equipment

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

Airless spray—Standard equipment such as Graco, DeVilbiss, Binks, Speeflo, or others having a 28:1 or higher pump ratio and a fluid tip with 0.013- to 0.015-inch (0.33- to 0.38-mm) orifice.

Conventional spray—Industrial equipment such as DeVilbiss MBC or Binks BBR spray gun. Separate air and fluid pressure regulators, and a moisture and oil trap in main air supply line are recommended.

Brush or roller - Natural bristle brush or solvent-resistant roller with ¼-inch to ⅜-inch nap. For best appearance when rolling, level any air bubbles with bristle brush.

Application Procedure

Amercoat 450HSG is packaged in two components in the proper proportions which must be mixed together before use:

1. Flush equipment with thinner or Amercoat 12 before use.
2. Stir each component thoroughly, then add cure to resin and mix until uniformly blended to a workable consistency. Do not mix more material than will be used within 4 hours at 65-80°F (18-27°C). Pot life is shortened by higher temperatures. See pot life data.
3. Thin only if necessary for workability.
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. If required, cross spray at right angles.
6. Application of 3 mils (75 microns) wet film thickness will normally provide 2 mils (50 microns) dry film.
7. Clean all equipment with thinner or Amercoat 12 immediately after use.
8. Keep containers tightly closed since repeated exposure to moisture will cause gelation. Moisture contaminated material is also subject to gassing on storage. Handle bulged containers with caution; lids may eject forcibly.

Shipping Data

Packaging units	1 gal	5-gal
cure	0.2 gal in 1-qt can	1 gal in 1-gal can
resin	0.8 gal in 1-gal can	4 gal in 5-gal can
Shipping weight (approx)	lb	kg
1-gal unit		
cure	2	0.9
resin	10.2	4.6
5-gal unit		
cure	9	4.1
resin	49	22
Shelf life when stored indoors at 40 to 100°F (4 to 38°C)	resin and cure 1 year from shipment date	

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.

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.**

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 International Performance Coatings & Finishes website at www.ameroncoatings.com.

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.

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