AMERCOAT®

Amercoat® 450H

450 Series

Gloss aliphatic polyurethane topcoat

Product Data/ Application Instructions

- 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 450H 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 and containers.
- General industrial and marine applications

Typical Systems

1st Coat	2nd Coat	3rd Coat
Dimetcote 9 Series or 21-5	Amercoat 385	Amercoat 450H
Amercoat 235, Amercoat 236, Amercoat 370 or Amercoat 385	Amercoat 450H	—
Amerlock Series	Amercoat 450H	—
Amercoat 68HS	Amercoat 385	Amercoat 450H
Amercoat 68WS	Amercoat 450H	—

Physical Data

Finish	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	67% ± 3%	
VOC (EPA Method 24)	lb/gal	g/L
unthinned	2.6	311
thinned (5% by volume)	2.8	340
Dry film thickness (per coat)	2-5 mils (50-125 microns)	
Coats	1 or 2	
Theoretical coverage		
	ft^2/gal	m^2/L
1 mil	1074	26.4
2 mils	537	13.2
Temperature resistance, dry	˚F/˚C	
	˚F	˚C
continuous	200	93
intermittent	250	121
Flash Point	°F	°C
cure	92	33
resin	97	36
Amercoat 65	81	27
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. Application by roller may require multiple coats for proper hiding.*

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.

*** Application up to 5 mils are acceptable. The recommended dry film thickness over Amercoat 68HS is a 3-5 mils dry film thickness. When brush or roller applied, multiple coats may be needed to achieve dry thickness. Multiple wet passes may be required to achieve 5 mils in certain applications.*

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 PPG representative for your particular corrosion protection needs. Amercoat 450H 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 450H.

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 450H 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.

Application Data

Substrates	Prepared and primed steel, concrete, aluminum, galvanizing, or aged coatings.
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	°F	°C
air and surface temp	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 (minutes)	10	30	90
through (hours)	4	8	24

Recoat times	F°/C°		
	90/32	70/21	50/10
minimum (hours)	2	4	12
maximum	Unlimited*		

*Surface must be dry and free of all contaminants.

(w/866m accelerator)	90/32	70/21	50/10	32/0
touch (minutes) @½ pt per mixed 5-gal unit	7	25	75	240
through @½ pt per mixed 5-gal unit	1¾	2½	8	36

Recoat times	F°/C°			
(w/866m)	90/32	70/21	50/10	32/0
minimum (hours)	1	1½	4	16
maximum	Unlimited*			

*Surface must be dry and free of all contaminants.

Thinner	Amercoat 65 or 101
Equipment cleaner	Amercoat 12

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. PPG 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 PPG 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.

PPG Protective & Marine Coatings
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