



# Amercoat 450SG

## Semi gloss aliphatic polyurethane topcoat (450 Series)

### Product Data/ Application Instructions

- Semi gloss coating with excellent gloss and colour 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
- Recoatable with itself

#### Typical Uses

Amercoat 450 SG 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.

#### Systems using Amercoat 450SG

First coat	Intermediate	Finish coat
Dimetcote	Amercoat 182ZP HB or Amercoat 385	Amercoat 450 Series
Amercoat 68 Series	Amercoat 182ZP HB or Amercoat 385	Amercoat 450 Series
Amercoat 71 or Amercoat 182ZP HB		Amercoat 450 Series
Amercoat 385		Amercoat 450 Series
Amerlock Series		Amercoat 450 Series

Maximum overcoating time for high solids epoxy coatings varies when overcoating with Amercoat 450SG at 21°C (70°F), for Amerlock 400, Amercoat 385 – 4 weeks; For Amerlock 2 or Amerlock 400 plus 861 - 1 week.

#### Physical Data

Finish .....	Semi gloss	
Colour .....	RAL and BS colours*	
Components .....	2	
Mixing ratio (volume) .....	4 resin to 1 cure	
Curing mechanism .....	solvent evaporation and reaction between components	
Volume solids .....	58% (ISO 3233)**	
VOC***		
EC SED 1999/13/EC .....	328 g/kg (424 g/l)	
UK PG6/23(92) Appendix 3 .	386 g/l (3.2 lbs/gal)	
Dry film thickness .....	50-100 microns	2 – 4 mils
Number of coats .....	1****	
Theoretical coverage .....	m <sup>2</sup> /L	ft <sup>2</sup> /gal
at 50 microns /2 mil dft.....	11.6	464
at 100 microns /4 mil dft.....	5.8	232
Temperature resistance	°C	°F
Continuous .....	120	250
Intermittent .....	150	302
Flashpoints	°C	°F
Cure .....	24	75
Resin .....	40	104
Mixed .....	24	75
Amercoat 920 .....	24	75
Amercoat 12 .....	24	75
Thinners .....	Amercoat 920	
Cleaner .....	Amercoat 12	

\* On tanks and other large structures previously coated with contrasting primer or intermediate coats, uniform appearance may require two coats of Amercoat 450SG. Use only a light coloured primer or intermediate coat when only one finish coat of Amercoat 450SG in a light colour is specified.  
An aluminium finish is only supplied in a non-staining semi-gloss tint.

\*\* Volume solids is measured in accordance with ISO 3233. Slight variations ±3% may occur due to colour and testing variances.

\*\*\* VOC figures are quoted according to both the EC directive 1999/13/EC which are theoretically calculated figures and the UK PG6/23(92) Appendix 3 which are practically determined figures.

\*\*\*\* Brush or roller application may require additional coats.

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## Chemical Resistance Guide

When applied over suitable primer or intermediate coat:

Environment	Splash and Spillage	Fumes and Weather
Acidic	Very good	Excellent
Alkaline	Very good	Excellent
Solvents	Good	Excellent
Salt solutions		
Acidic	Excellent	Excellent
Neutral	Excellent	Excellent
Alkaline	Excellent	Excellent
Water	Excellent	Excellent

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

## Surface Preparation

STEEL - Prepare surface in accordance with application instructions for the specific primer being used. Be sure primer is clean and dry when Amercoat 450SG 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 having a fluid tip with a 0.28 to 0.43 mm (0.011 to 0.017 inch) orifice.

### CONVENTIONAL SPRAY

Industrial equipment Having 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

Substrates .....	Prepared and primer steel, concrete, aluminium, galvanizing or aged coatings.
Surface preparation.....	Refer to Typical Systems for specific primer or intermediate coatings recommended.
Application method.....	Airless or conventional spray, brush or roller.
Mixing ratio (volume).....	4 resin to 1 cure
Potlife (°C/°F)	32/90 21/70 10/50 3 hrs 6 hrs 12 hrs

### Environmental conditions

Air temperature .....	0-50 °C	32-122 °F
Surface temperature .....	0-60 °C	32-140 °F

*Surface temperature must be at least 3°C / 5°F above the dew point to prevent moisture condensation on the surface.*

Drying times (°C/°F)	32/90 21/70 10/50
Dry to touch.....	45 min 1 hr 2 hrs
Dry through .....	3 hrs 4 hrs 8 hrs
Fully cured.....	5 days 7 days 14 days

Recoat times (°C/°F)	32/90 21/70 10/50
Minimum time.....	2 hrs 4 hrs 8 hrs
Maximum time.....	not limited

Thinner..... Amercoat 920

Equipment cleaner .....

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## Application Procedure

Amercoat 450SG is packaged in the proper mixing proportions of resin and cure which must be mixed together before use.

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 potlife 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 86 µm ( 3.4 mil) wet film thickness will normally provide 50 µm (2 mil) 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 450SG will cure and cause clogging.

## Repair

For repair, or application of additional thickness, Amercoat 450SG may be over coated with itself unlimited. Ensure surface is clean prior to application

## Shipping Data

### Packaging

Resin .....	16 L in 20 L can
Cure .....	4 L in 5 L can

### Shipping weight

	kg	lb
Resin .....	approx. 25	55
Cure .....	approx. 5	11

### Shelf life

Resin and cure .....	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 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

PPG warrants its products to be free from defects in material and workmanship. PPG's sole obligations and Buyer's exclusive remedy in connection with the products shall be limited, at PPG'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 PPG 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 PPG of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

**PPG 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 PPG be liable for consequential or incidental damages.**

Any recommendations or suggestion relating to the use of the products made by PPG, 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 discretion and risk. Variation in environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results.

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Due to PPG'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 PPG Protective & Marine Coatings website at [www.ppgpmc.com](http://www.ppgpmc.com)

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.