



Amercoat 450 GL

Aliphatic polyurethane

(450 Series)

Product Data/ Application Instructions

- **Outstanding weather resistance**
- **Excellent colour and gloss retention**
- **Resists soil pick up - easily cleanable**
- **Hard, tough, flexible, and abrasion resistant**

Typical Uses

As a finish coat where attractive appearance and a wide range of corrosion resistance is required for chemical plants, pulp and paper mills, offshore platforms petroleum refineries containers etc.

Systems Using Amercoat 450 GL

Amercoat 450 GL can be applied directly over primers such as Amercoat 68, Amercoat 71, or as a glossy finish coat over high build epoxies such as Amercoat 383 HS.

Outstanding Characteristics

Amercoat 450 GL is an Aliphatic Polyurethane coating, which has excellent resistance to weathering and chemical, industrial and marine environments. Amercoat 450 GL forms a hard, tough, flexible and abrasion resistant coating with excellent colour and gloss retention.

Physical Data

Finish	High gloss
Colour	RAL and BS colours*
Components	2
Mixing ratio (volume)	4 part resin to 1 part cure
Curing mechanism	solvent evaporation and reaction between components
Volume solids	56% *
Dry film thickness	50 microns (2 mil) per coat
Number of coats	1
Theoretical coverage	11.6 m ² /L at 50 microns.
allow for application losses, due to surface irregularities etc.	

Temperature resistance	°C
Continuous	93 dry
Intermittent	121 dry
Flashpoints	°C
Cure	30
Resin	30
Amercoat 65	24
Amercoat 12	21

Thinner	Amercoat 65
Cleaner	Amercoat 12

*Volume solids is measured in accordance with ASTM-D-2697. Variations may occur due to colour and testing variances

Amercoat 450 GL

Surface Preparation

STEEL-Prepare surface in accordance with Application instructions for the specific primer being used. Be sure primed area is clean and dry when Amercoat 450 GL is applied.

Application equipment

The following equipment is listed as a guidance. Suitable equipment from other manufacturers may be used.

Adjustments of pressures and of tip sizes may be Needed to obtain the proper spray characteristics.

AIRLESS SPRAY- Standard airless spray equipment such as Graco with a 0.38 to 0.43 mm (0.015 to 0.021 inch) orifice/ tip.

CONVENTIONAL SPRAY- Industrial equipment such as Devilbiss MBC or JGA gun with 78 or 765 air cap and " E" fluid tip.

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

Application Data

Substrates	Prepared and primed surfaces.				
Surface preparation	Refer to the Product Data Sheets of specific primer or intermediate coatings recommended.				
Application method	Airless or conventional spray, brush or roller.				
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.					
Potlife (21°C/ 70°F)	21 hours				
Drying times (°C/°F)					
Dry to touch	40/104	32/90	21/70	10/50	5/41
Dry through (hours).....	30 min	45 min	1 hr	2 hrs	4 hrs
Fully cured (days)	2 h	4 h	8 h	12 h	16 h
	3 d	5 d	7 d	14 d	28 d
Thinner	Amercoat 65				
Equipment cleaner.....	Amercoat 12				
* Amercoat 450GL can be recoated with itself when dry through. However, surfaces must be clean, dry and free of contamination immediately prior to recoating. Refer to PPG Explanatory Notes. PPG Technical Service can advise on suitable cleaning methods.					

Application Procedure

Amercoat 450 GL is packed in the proper mixing Proportions of resin base and curing solution which must be mixed together

Amercoat 450 GL

20 ltr resin in 25 ltr can
5 ltr cure in 5 ltr can

1. Flush equipment with Amercoat 12 before use.
2. Stir both resin base and curing solution to an even consistency with a Power mixer
3. Add curing solution to resin solution and continue stirring for 5 minutes.
Note: Do not mix more material than will be used with 20 hours at 21°C. Pot life is shortened by higher temperatures.
4. For conventional spray, thin only as needed for workability within not more than 10 vol % of Amercoat 65. Thinning is normally not needed.
5. Apply a wet coating even parallel passes. Overlap each pass 50% to avoid bare areas, pinholes or holidays.
6. Give special attention to corners, welds, rough areas, edges etc.
7. The application of 102 microns will normally provide 50 microns (2 mills) 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 large 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 condensation will not form on surface.
11. Clean all equipment with Amercoat 12 immediately after use or at least at the end of each working day or shift. When left in spray equipment, Amercoat 450GL will cure and cause clogging'.

Drying & Curing times(at 50 microns)
To touch 1- 2 hours 21°C
Dry through 8 hours 21°C

Curing time is temperature dependent.
At 21°C seven days are required for a full cure.
For mild atmospheric exposure, coating may be placed in service before it is fully cured

Repair

For repair, or application of additional thickness, Amercoat 450 GL has a long-term over coating period with itself. Ensure surface is clean, dry and free from contamination immediately prior to application.

Packaging

Resin 20 L
Cure..... 5 L

Shipping weight

Resin approx. 27.96 kg
.....
Cure..... approx. 5.13 kg

Minimum 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)

Amercoat 450 GL

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.

Limitation of Liability

PPG's liability on any claim of any kind, including claims based upon PPG'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 PPG be liable for consequential or incidental damages.

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

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.

PPG Coatings Europe BV

www.ppgpmc.com