



Amercoat 450X

Aliphatic polyurethane

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 an 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 450X

Amercoat 450X can be applied directly over epoxy primers and tie-coats both inhibitive and zinc rich. Such as Amercoat 182ZP HB, Amercoat 71, Amercoat 68SA and Amerlock 400 etc. It can be applied as a glossy top coat over high build epoxies such as Amercoat 383HS and Amercoat 385 etc.

Outstanding Characteristics

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

Application Data Summary

For complete information on procedure, equipment and safety precautions, see the application instructions in the accompanying sheet.

Like all high performance coatings, Amercoat 450X must be applied as recommended to obtain the maximum performance.

Physical Data

Finish	glossy
Colour	see Colour Card
Surface	suitable for primed concrete and steel
Components	2
Cure	solvent evaporation and reaction between components
Volume solids	58.0% **
Dry film thickness	50-80 microns (2-3.2 mil) per coat
Number of coats	1*
Calculated coverage	11.6 m ² /ltr at 50 microns (2 mil) allow for application losses, surface irregularities, etc.
Application	airless or conventional spray
Potlife (at 20°C)	6 hours
Drying times at 20°C and 50 µm dft	
dry to touch	1 hour
dry through	4 hours
Potlife and drying times are dependent on temperature and quantities mixed.	
Mixing ratio (by volume)	
resin	4 parts
cure	1 part
Temperature resistance	
Continuous	93°C dry
Intermittent	121°C dry
Thinner	Thinner 21-06
Cleaner	Thinner 90-58
Flash points (Closed Cup)	
resin	30°C
cure	30°C
Thinner 21-06	24°C
Thinner 90-58	21°C
Packing	
resin	20 ltr
cure	5 ltr
Shipping weight	
resin	approx. 27.40 kg
cure	approx. 4.95 kg

** Volume solids is measured in accordance with ASTM D2697. Variations may occur due to colour and testing variances.

Amercoat 450X

Surface Preparation

Prepare substrates in accordance with application instructions for the specific primer being used. Ensure surfaces of primer and intermediate coatings are clean, dry and free from contamination immediately prior to application of Amercoat 450X.

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 is recommended.

BRUSH/ROLLER

Apply evenly, using a clean well-loaded brush or roller. Ensure the coating is not brushed or rolled-out too far. Typically 35-50 microns dft. can be achieved in a single application.

MIXER

Use power mixer 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 Sheet 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 (°C/°F)	40/104	21/70	10/50	5/41	
	1 hr	6 hrs	12 hrs	18 hrs	
Drying times (°C/°F)	40/104	32/90	21/70	10/50	5/41
Dry to touch	30 min	45 min	1 hr	2 hrs	4 hrs
Dry through.....	2 hrs	3 hrs	4 hrs	8 hrs	16 hrs
Fully cured.....	3 days	5 days	7 days	14 days	28 days
Recoat times (°C/°F)	40/104	32/90	21/70	10/50	5/41
Minimum	1 hr	2 hrs	4 hrs	8 hrs	16 hrs
Maximum*	not limited				
Thinner	Thinner 60-15				
Equipment cleaner	Thinner 90-58				

* Amercoat 450X has long-term recoatability with itself. 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.

Amercoat 450X

Application Procedure

Amercoat 450X 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 until homogeneous.
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 (3.5 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 450S will cure and cause clogging.

Repair

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

Shipping Data

Packaging		
Resin	16 L in 20 L can	
	4 L in 5 L can	
Cure	4 L in 5 L can	
	1 L in 1 L can	
Shipping weight	kg	lb
Resin	approx. 25	55
.....	approx. 6.5	14.3
Cure	approx. 5	11
	approx. 1.1	2.4
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 450X

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.