PPG Amercoat

Amercoat® 242

Universal glass flake epoxy coating

Product Data/ Application Instructions

- High build glassflake epoxy coating
- Formulated for direct-to-metal application with excellent substrate wetting while retaining excellent edge coverage
- Exceptional corrosion protection in salt and fresh water immersion and corrosive chemical environments
- Low temperature cure down to 0˚F (-18˚C) without additives or alternate curing agents
- Fast dry-to-recoat and rapid handling properties
- High-build (up to 20 mils) in one coat
- Abrasion resistant

Very low solvent content meets VOC requirements, reduces the risk of pinholing and solvent entrapment at the substrate-coating interface, often a major cause of coating failure with conventional epoxies and lower solids systems.

Typical Uses

Rail Car Applications

- Lining for rail cars in high abrasion and high impact service

Typical Systems

1st coat	2nd Coat	3rd coat
Amercoat 242	None	None
Amercoat 242	Amercoat® 229 Series, 450 Series, Amershield, PSX® 700	None
Amercoat 242	Amercoat 242	None

Physical Data

Finish	Low sheen
Color*	Buff, Haze gray, Pastel green, Oxide red, White
Components	2
Curing mechanism	Solvent release and chemical reaction between components
Volume solids (ISO 3233 modified)	88% ± 3%
Dry film thickness (per coat)	8-20 mils (200-500 microns)
Coats	1 or 2

Theoretical coverage	ft^2/gal	m^2/L
1 mil (25 microns)	1412	34.3
12 mils (300 microns)	118	2.9
20 mils (500 microns)	71	1.7

VOC (EPA 24)	lb/gal	g/L
mixed	1.2	145

Temperature resistance	dry	
	°F	°C
continuous	250	121

Flash point (SETA)	°F	°C
Amercoat 242 resin	122	50
Amercoat 240 cure	138	59
Amercoat 65	81	27
Amercoat 12	2	-17

* Surface discoloration may occur upon exposure to sunlight, elevated temperatures or chemicals. However, this does not impact performance.

Surface Preparation

Coating performance is, in general, proportional to the degree of surface preparation. Abrasive blasting is usually the most effective and economical method. When this is impossible or impractical, Amercoat 242 can be applied over mechanically cleaned surfaces. All surfaces must be clean, dry and free of all contaminants, including salt deposits. Contact PPG for maximum allowable salt containment levels.

Steel—Remove all loose rust, dirt, grease or other contaminants by one of the following depending on the degree of cleanliness required: SSPC-SP6 or 10 (ISO 8501-1 St-1, Sa 2½). These minimum surface preparation standards apply to steel that has been previously abrasive blasted. The choice of surface preparation will depend on the system selected and end-use service conditions.

For more severe service and immersion, clean to SSPC-SP10 (ISO 8501-1 Sa 2½). Blast to achieve an anchor profile of 2-3 mils (50-75 microns) as indicted by a Keane-Tator Surface profile Comparator or Testex Tape.

Repair—Prepare damaged areas to original surface preparation specifications, feathering edges of intact coating. Thoroughly remove dust or abrasive residue before touch-up.

Application Data

Applied over	Steel, concrete, aluminum, galvanizing
Surface preparation	
Steel	Abrasive blasting, PER, SSPC-SP 6, SP10 (ISO 8501-1, Sa 2, Sa 2.5) or manual preparation
Method	Airless or conventional spray. Brush or roller (may require additional coats).
Mixing ratio (by volume)	4 part resin to 1 part cure
Induction time (minutes)	70˚F/21˚C 15
Environmental conditions	
air and surface temperature	20˚ to 122˚F (-7˚ to 50˚C)
material temperature	50˚ to 90˚F (10˚ to 27ºC)

Surface temperatures must be at least 5˚F (3˚C) above dew point to prevent condensation. At freezing temperatures, surface must be free of ice.

Thinner	Amercoat 65
Equipment cleaner	Thinner or Amercoat 12

Pot life (including induction time)

˚F/˚C	90/32	80/27	70/21
	40 min.	60 min.	90 min.

Drying time @ 6 mils (150 microns) DFT (hours)

˚F/˚C	90/32	70/21	50/10	32/0	16/-5
dry to touch	3	5	10	24	28
dry hard	6	8	13	30	48

Cure to Immersion* - Tank Lining Service

˚F/˚C	120/49	90/32	70/21	50/10	32/0	20/-7
(days)	2	3	7	7	7	7

* These cure-to-immersion times refer to tanks with forced ventilation.

Recoat/Topcoat time @ 6 mils (150 microns) DFT

˚F/˚C	90/32	70/21	50/10	32/0	20/-7
minimum (hours)					
Amercoat 242	2	5	8	14	28
Amercoat 229 Series, 450 Series, PSX 700	3	6	10	16	40

˚F/˚C	90/32	70/21	50/10	32/0	20/-7
maximum (months)**					
Amercoat 242	6	6	6	6	6
Amercoat 229 Series, 450 Series, PSX 700	3	3	3	3	3

Drying times are dependent on air and surface temperatures as well as film thickness, ventilation and relative humidity. Maximum recoating time is highly dependent upon actual surface temperatures - not simply ambient air temperatures. Surface temperatures should be monitored, especially with sun-exposed or otherwise heated surfaces. Higher surface temperatures shorten the maximum recoat window.

** Surface must be clean and dry. Any contamination must be identified and adequately removed. A detergent wash with Prep 88 or equivalent is required prior to application of topcoats after 30 days of exposure. However particular attention must be paid to surfaces that have been exposed to sunlight and where chalking may be present. In those situations, a further degree of cleaning may be required. PPG Technical Service can advise on suitable cleaning methods. If the maximum recoat/topcoat time is exceeded, then roughen surface.

Application Equipment

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

Airless spray—Standard equipment with pump ratio of 45:1 or larger, with a 0.021 inch or larger fluid tip, ⅜" to ½" ID hose with 50 ft. maximum length. Long hose runs or location of work at heights 20-30 feet higher than the pump location may require higher pump ratios.

Power mixer—Jiffy Mixer powered by an air or explosion-proof electric motor.

Brush or roller—Additional coats may be required to attain proper thickness. (Brushing and rolling typically give about 3 mils [75 microns] dft.)

To obtain the maximum performance, adhere to all application instructions, precautions, conditions and limitations. For conditions outside the requirements or limitations described, contact your PPG representative.

Application Procedure

1. Flush all equipment with thinner or Amercoat® 12 before use.
2. Stir resin using an explosion proof power mixer to disperse into a homogeneous mixture.
3. Add cure to resin. Mix thoroughly until uniformly blended to a workable consistency.
   Induction time (minutes) 70˚F/21˚C
   15
4. Do not mix more material than can be used within the expected pot life, 90 minutes at 70˚F. Higher material temperatures will shorten the pot life considerably.
5. For optimum application, material should be between 50˚ to 90˚F (10˚ to 32˚C).
6. Use only Amercoat 65 thinner at 10% by volume, maximum. Below 50˚F additional thinning may be needed and multiple coats required to achieve specified thickness.
7. To minimize orange peel appearance, adjust conventional spray equipment to obtain adequate atomization at lowest air pressure.
8. Apply a wet coat in even, parallel passes with 50 percent overlap to avoid holidays, bare areas and pinholes. If required, cross spray at right angles.
9. When applying directly over inorganic-zincs or zinc-rich primers, a mist coat/full coat technique may be required to minimize bubbling. This will depend on the age of the primer, surface roughness and conditions during curing.
10. Ventilate confined areas with clean air during application, between coats, and while curing the final coat. Prevent moisture condensation on the surface between coats.
11. Repair damaged areas by brush or spray.
12. Clean equipment with thinner or Amercoat 12 immediately after use.

Note: Consult Code of Federal Regulations Title 29, Labor, parts 1910 and1915 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.

Shipping Data

Packaging unit-US	1 gal	5 gal
Shipping weight (approx.)	lbs/kg	lbs/kg
1-gal unit		
242 resin	11.8/5.4	
240 cure	2.0/0.9	
5-gal unit		
242 resin	59.0/26.80	
240 cure	9.1/4.10	

Shelf life when stored indoors at 40˚ to 100˚F (4˚ to 38˚C)
resin and cure 1 year from shipment date.

Numerical values are subject to normal manufacturing tolerances, color and testing variances. Allow for application losses and surface irregularities.

This mixed product is photochemically reactive as defined by the South Coast Air Quality Management District's Rule 102 or equivalent regulations.

Safety Precautions

Read each component's material safety data sheet before use. Mixed material has hazards of both components. 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 solvent 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 and space, of which PPG is unaware and over which it has no control.

If you do not fully understand the warnings and instructions or if you cannot strictly comply with them, do not use the product.

This product is for industrial use only. Not for residential use in California.

PPG Protective & Marine Coatings
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