

AMERCOAT® 240

April 2013
Revision of October 2012

DESCRIPTION	Universal Amine Epoxy Coating
PRINCIPAL CHARACTERISTICS	<ul style="list-style-type: none"> – Multi-purpose epoxy for industrial and marine applications – Ballast tanks, fuel tanks, jet fuel, voids, bilge, and underwater hull application – Heavy industry, structural steel – Surface tolerant, compatible with water jetted surfaces – > 70% edge retention – Abrasion resistant – Low VOC, extremely low HAPs – Up to 12 mils dft in one coat
COLOR* AND GLOSS	<p>Off White, Buff, Haze gray, Pastel green, Oxide red, black Semi-gloss</p> <p><i>* Epoxy coatings will chalk and fade upon exposure to sunlight, elevated temperatures, or chemical exposure. Discoloration and normal chalking does not impact performance. Light colors will darken over time. Some batch-to-batch variation in color is to be expected. Color matches are approximate.</i></p>
BASIC DATA	
Volume solids	87% ± 3%
VOC	1.2 lbs/gal (145 g/L) (EPA Method 24)
Recommended Dry film thickness (per coat)	4 – 12 mils (100 – 300 microns)
Theoretical Spread Rate	@ 6 mils (5.6 m ² /l) 233 ft ² /gal
Components	2
Shelf Life	3 years from date of manufacture
Specific gravity	1.52 g/cm ³ (based on Off White)
SURFACE PREPARATION	<p>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, <i>Amercoat 240</i> 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.</p>
Mild Steel	<ul style="list-style-type: none"> – Remove all loose rust, dirt, grease or other contaminants by one of the following depending on the degree of cleanliness required: SSPC SP-2, 3, 6, 7 or 10 (ISO 8501-1 St-2, St-3, Sa 1, Sa 2.5). 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 SP-10 (ISO8501-1 Sa 2.5). Blast to achieve an anchor profile of 2-4 mils (50-100microns) as indicted by a Keane-Tator Surface profile Comparator or Testex Tape. Previously blasted steel may be ultra-high pressure water jetted to SSPC SP WJ-2(L) / NACE WJ-2(L). The wet surface can be dried by blowing with dry compressed air giving special attention to horizontal surfaces and recesses.
Concrete	<ul style="list-style-type: none"> – Prepare / clean surface in accordance with SSPC SP-13 guidelines. Abrade surface per ASTM D-4259 to remove all efflorescence and laitance, to expose sub-surface voids, and to provide a surface roughness equivalent of 60 grit sandpaper or coarser. Test for moisture by conducting a plastic sheet test in accordance with ASTM D4263. Fill voids as necessary with <i>Amercoat 114A</i> epoxy filler.

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- Galvanized Steel
 - Remove oil or soap film with detergent or emulsion cleaner. Lightly abrasive blast with a fine abrasive in accordance with SSPC SP-16 guidelines to achieve a profile of 1.5-3.0 mils. When light abrasive blasting is not possible, galvanizing can be treated with a suitable zinc phosphate conversion coating. Galvanizing that has at least 12 months of exterior weathering and has a rough surface with white rust present may be over-coated after power washing and cleaning to remove white rust and other contaminants. The surface must have a measurable profile. A test patch is recommended to confirm adhesion. Not recommended over chromate sealed galvanizing without blasting to thoroughly remove chromates. Adhesion problems may occur.
- Non-Ferrous Metals and Stainless Steel
 - Abrasive blast in accordance with SSPC SP-16 guidelines to achieve a uniform and dense 1.5-4.0 mil anchor profile. Size and hardness of abrasive should be adjusted as necessary based on the hardness of the substrate. Aluminum may be treated with a surface treatment compliant with Mil-DTL-5541 or equivalent (non-immersion applications only).
- Aged coatings
 - All surfaces must be clean, dry, tightly bonded and free of all loose paint, corrosion products or chalky residue. Abrade surface, or clean with Prep 88. Amercoat 240 is compatible over most types of properly applied and tightly adhering coatings, however, a test patch is recommended to confirm compatibility.
- Repair
 - Prepare damaged areas to original surface preparation specifications, feathering edges of intact coating. Thoroughly remove dust or abrasive residue before touch-up.

Requirements for Water Ballast Tanks subject to IMO-MSC.215(82) (PSPC):

- steel; ISO 8501-3:2006 grade P2, with all edges treated to a rounded radius of minimum 2 mm or subject to three pass grinding
- steel or steel with not approved zinc silicate shop primer; blast cleaned to ISO-Sa 2.5, blast profile 30 - 75µm
- steel with approved zinc silicate shop primer, weld seams and areas of damage shop primer or breakdown should be blast cleaned to ISO-Sa 2.5, blasting profile 30 - 75µm
- for shop primer with IMO type approval; no additional requirements
- for shop primer without IMO type approval; blast cleaned to ISO-Sa2 removing at least 70% of intact shop primer, blasting profile 30 - 75µm
- dust quantity rating “1” for dust size class “3”, “4” or “5”, lower dust size classes to be removed if visible on the surface to be coated without magnification (ISO 8502-3:1992)

ENVIRONMENTAL CONDITIONS

Ambient temperatures	20°F to 122°F (-7°C to 50°C)
Material temperatures	50°F to 90°F (10°C to 32°C)
Relative humidity	85% maximum
Surface temperature	Must be at least 5°F above dew point temperature. Maximum 140°F unless a lower maximum is specified.
General air quality	Area should be sheltered from airborne particulates and pollutants. Avoid combustion gases or other sources of carbon dioxide that may promote amine blush. Ensure good ventilation during application and curing. Provide shelter to prevent wind from affecting spray patterns. Refer to Information Bulletin #1489 for further information on prevention of amine blush.

INSTRUCTIONS FOR USE

Mixing ratio by volume	4 parts base to 1 part hardener
Pot life	Pre-mix pigmented components with a pneumatic air mixing at moderate speeds to homogenize the container. Add hardener to base and agitate with a power mixer for 1-2 minutes until completely dispersed.

	50°F	70°F	90°F
Pot life	3 hours	1.5 hours	40 min.

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Induction time	15 minutes at 70°F, 30 minutes at 50°F
Airless spray	45:1 pump or larger, 0.019 - 0.023 fluid tip, 2400 - 3,000 psi.
Air spray	Thin up to 15%, standard conventional equipment
Brush & roll	Use a high quality natural bristle brush and / or solvent resistant, 3/8" nap roller. Ensure brush / roller is well loaded to avoid air entrainment. Multiple coats may be necessary to achieve adequate film build.
Thinner	Amercoat T-10 thinner or PPG 91-92 thinner
Cleaning solvent	12 Cleaner
Primers	Inorganic zinc primers or zinc rich epoxies (atmospheric service)
Topcoats	Amercoat 450H, Amershield, PSX 700, Amercoat 5410, Pitthane Polyurethane
Safety precautions	For paint and recommended thinners see safety sheet 1430, 1431 and relevant material safety data sheets This is a solvent borne paint and care should be taken to avoid inhalation of spray mist or vapor as well as contact between the wet paint and exposed skin or eyes.

DRY/CURE TIMES

Amercoat 240 @ 6 mils dft

	20°F	32°F	50°F	70°F	90°F
Dry to touch	36 hours	24 hours	10 hours	5 hours	3 hours
Dry through	60 hours	36 hours	16 hours	10 hours	8 hours
Dry to recoat*	36 hours	24 hours	14 hours	7 hours	4 hours
Max recoat, self	180 days	180 days	90 days	60 days	30 days
Max topcoat, urethanes, PSX**	90 days	90 days	60 days	30 days	15 days
Cure to immersion***	21 days	14 days	10 days	6 days	3 days

* Antifouling coatings should be applied when the previous coat is tack free, but impressionable with moderate finger tip pressure.

Alkyd coatings and waterborne acrylic coatings should be applied after the film is dry through and no greater than three times the dry through time.

** Dry 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 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 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 exposed to sunlight 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 maximum recoat/topcoat time is exceeded, then roughen surface.

*** On underwater hull systems, the vessel can be launched after the specified dry-to-launch period indicated in the application instructions for the antifouling.

PRODUCT QUALIFICATIONS

- Type Approval by DNV and ABS to comply with IMO Resolution MSC.215(82) Performance Standard for Protective Coatings (PSOC) for seawater ballast tanks.
- NAVSEA Mil-PRF-23236(D) Classes 5, 7 and 17, Type VII, Grade C
- NAVSEA Mil-PRF-24647 underwater hull
- Marintek Class B1 for use in saltwater ballast tanks
- Tested by NOHC as being suitable as a lining for grain storage containers
- Meets performance requirements of Mil-PRF-4556(F) for storage of jet fuels
- Qualified to NORSOK M501 Systems 3B

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AVAILABILITY

Packaging	1-gallon and 5-gallon kits	
Product codes	AT 240-1	Buff base
	AT 240-20	Haze Gray base F/S 26270
	AT 240-35	Off White base
	AT 240-72	Oxide Red base
	AT 240-9	Black base
	AT 240-B	Hardener (Part B)

Worldwide statement While it is always the aim of PPG Protective & Marine Coatings to supply the same product on a worldwide basis, slight modification of the product is sometimes necessary to comply with local or national rules/circumstances. Under these circumstances an alternative product data sheet is used.

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