PPG Amercoat

# Amercoat® 133

*100% solids epoxy coating*

## Product Data/ Application Instructions

- 100% solids two-component coating
- Excellent chemical, solvent and water immersion resistance
- Can be applied up to ½" thick on horizontal surfaces

### Typical Uses

- Complete tank and water pipe lining (potable, salt, waste)
- Repair of tank bottoms, including water tanks, fuel tanks, selected chemical tanks and ballast tanks
- Repair of pitted steel surfaces
- Used as a primer for Amercoat 333 edge retentive epoxy coating when a coating system with maximum edge coverage is required.

### Typical Properties

| Properties | Test Method | Results |
|---|---|---|
| Adhesion, elcometer | (ASTM D4541) | 900 psi |
| Tensile Strength | ASTM D 2370-68 | 1409 psi |
| Flexural Strength (yield strength) | ASTM D 790 | 4819 psi |
| Shore Hardness | Shore D | 75 |
| Dielectric Strength | ASTM D 149 (short term test) | 1020 volts/mil |
| Cathodic Disbondment | ASTM G 8-72 2 months @ 3 volts | Passes |

### Qualifications

Approved for use under NAVSEA QPL-23236 (consult PPG for qualification data)

**ANSI/NSF Standard 61***- For use in drinking water.

**For NSF application information, please visit our website at www.ppgamercoat.ppgpmc.com/NSF/*

### Physical Data

| | |
|---|---|
| Finish | High-gloss |
| Colors | Off white, oxide red |
| Components | 2 |
| Curing mechanism | Chemical reaction between components |
| Volume solids (calculated) | 100% |
| Dry film thickness per coat | 4-24 mils (100-600 microns) |

| Theoretical coverage | $ft^2$/gal | $m^2$/L |
|---|---|---|
| 4 mil (25 microns) | 401 | 9.9 |
| 8 mils (200 microns) | 200 | 4.9 |
| 20 mils (500 microns) | 80 | 2.0 |

| | lb/gal | g/L |
|---|---|---|
| VOC (EPA 24) | 0.6 | 72 |
| VOC (Calulated) | 0.3 | 38 |

| Flash point (SETA) | °F | °C |
|---|---|---|
| Amercoat 133 cure | >218 | >103 |
| Amercoat 133 resin | >200 | >93 |
| T-10 | 80 | 27 |
| Amercoat 12 | 2 | -17 |

### Application Data

| | |
|---|---|
| Applied over | Prepared steel |
| Surface preparation steel | SSPC-SP10 |
| Method | Airless spray, brush or roller |
| Mixing ratio (by volume) | 4 parts resin to 1 part cure |

| Pot life (hours) | °F/°C |
|---|---|
| | 77/25 |
| | 2 |

Environmental conditions

| Temperature | °F | °C |
|---|---|---|
| air and surface | 50 to 90 | 10 to 32 |
| material | 50 to 90 | 10 to 32 |

Surface temperatures must be at least 5°F (3°C) above dew point to prevent condensation.

| Drying time (ASTM D1640) (hours) | °F/°C | | |
|---|---|---|---|
| | 90/32 | 70/21 | 50/10 |
| hard | 14 | 24 | -- |
| Recoat time* | | | |
| minimum | 6 | 10 | 26 |
| maximum (days) | 7 | 30 | 30 |

*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 tempertures shorten the maximum recoat window.*

**Roughen surface if maximum recoat time is exceeded.*

| Time before service @ 8 mils (days) | °F/°C | | |
|---|---|---|---|
| | 90/32 | 70/21 | 50/10 |
| immersion** | 4 | 7 | 14 |

***Cure at 50°F minimum.*

| | |
|---|---|
| Equipment cleaner | Amercoat 12, T-10 |

## Surface Preparation

Coating performance is, in general, proportional to the degree of surface preparation. Prior to coating, the surface must be clean, dry, undamaged and free of all contaminants, including salt deposits. Round off all rough welds and remove all weld spatter.

**Steel** – Abrasive blast SSPC-SP10. Blast to achieve an anchor profile of 2 mils (50 microns) minimum, as indicated by a Keane-Tator Surface Profile Comparator, Testex Tape or similar device. Remove abrasive residue or dust from surface. Apply Amercoat 133 as soon as possible to keep steel from rusting.

*Note: Apply Amercoat 133 as soon as possible after surface preparation to prevent recontamination. Do not leave blasted steel uncoated overnight. In case of contamination, remove contaminants. Spot blast if needed.*

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

## Mixing and Thinning

Amercoat 133 coating is a two component product supplied in 5 gallon kits which contain the proper ratio of ingredients. The entire contents of each container must be mixed together.

Mix the resin portion slowly for several minutes. After mixing the resin portion, add the cure slowly with continued agitation. After the cure add is complete, continue to mix slowly until the system is homogeneous.

Thinning is not required.

## Application Equipment

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

**Airless spray** – Standard equipment with a ratio of 45:1, such as Graco King. Pump should be equipped with ⅜ inch internal diameter high pressure spray hose for lengths of less than 50 feet. For length greater than 50 feet, spray hose should be ½ inch internal diameter and spray tip should be .023 to .029 inch.

**Power mixer** – Jiffy Mixer

**Brush or Roller** – Additional coats may be required to attain proper thickness.

## Shipping Data

| | | |
|---|---|---|
| Packaging | 1- and 5-gal can | |
| cure | 0.2 gal in 1-quart can<br>1.0 gal in 1-gal can | |
| resin | 0.8 gal in 1-gal can<br>4.0 gal in 5-gal can | |
| Shipping weight (approx) | lb | kg |
| 1-gal unit | | |
| cure | 2.5 | 1.1 |
| resin | 9.3 | 4.2 |
| 5-gal unit | | |
| cure | 9.0 | 4.1 |
| resin | 69.0 | 39.4 |

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

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

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

## Application Procedure

Amercoat 133 is packaged in the correct proportions of base and converter which must be mixed together before use.

1. Flush equipment with Amercoat 12 or T-10.
2. Stir both resin and cure to an even consistency. Add cure to resin mixing until a uniform consistency is achieved. **Do not use thinners**. Never mix more than can be sprayed within pot life time.
3. Apply a wet coat in even, parallel passes. Overlap each pass 50 percent to avoid bare areas, pinholes or holidays. Cross spray at right angles if necessary.
4. Material temperature must be between 50 and 90°F, preferably @ 75°F. Higher temperatures shorten the pot life. Lower temperatures affect sprayability.
5. Ventilate with clean air during application. Maintain air temperature to prevent condensation on coating surface.
6. Check film thickness using a wet film thickness gauge. If film is less than specified apply additional material.
7. When a pinhole-free film is required, check for bare areas, pinholes and holidays with a non-destructive wet sponge holiday detector such as Tinker-Rasor Model M1 or Model AP/W. Apply additional Amercoat 133 to areas requiring touch-up within maximum recoat time.
8. Clean equipment with Amercoat 12 cleaner immediately after use.

## Safety Precautions

Read each component's material safety data sheet before use. Mixed material has hazards of each component. Safety precautions must be strictly followed during storage, handling and use.

**CAUTION – Improper use and handling of this product can be hazardous to health.**

**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 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 environment and space, of which PPG is unaware and over which it has no control.**

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

**Note**: Consult Code of Federal Regulations Title 29, Labor, parts 1910 and 1915 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.

***This product is for industrial use only. Not for residential use.***

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