AMERCOAT® 253

DESCRIPTION

Novolac epoxy tank lining

PRINCIPAL CHARACTERISTICS

- Exceptional resistance to a broad range of chemicals, solvents and fuels
- Practical application properties and cure schedules
- Does not require baking to cure
- High volume solids
- Two coat system

COLOR AND GLOSS LEVEL

- White, Pastel Red, Light Blue, Gray
- Semi-gloss

Note:

- Epoxy coatings will chalk and fade upon exposure to sunlight, elevated temperatures, or chemical exposure. Discoloration and normal chalking do not impact performance. Light colors will darken over time. Some batch-to-batch variation in color is to be expected. Color matches are approximate.

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Volume solids	72 ± 2%
VOC (Supplied)	EPA Method 24: 1.9 lb/US gal (226.0 g/l)
Recommended dry film thickness	5.0 - 6.0 mils (125 - 150 µm) depending on system
Theoretical spreading rate	231 ft^2/US gal for 5.0 mils (5.8 m^2/l for 125 µm)
Shelf life	Base: at least 24 months when stored cool and dry Hardener: at least 24 months when stored cool and dry

Notes:

- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time
- Maximum recommended dry film thickness is 18 mils.

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RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Steel

- Remove weld spatter, protrusions, and laminations in steel. Grind welds smooth in accordance with NACE RP-0178
- Remove all surface contaminants, oil and grease in accordance with SSPC SP-1
- Abrasive blast with an angular abrasive to an SSPC SP-10 cleanliness or higher. Achieve a surface profile of 1.5 – 3.0 mils (38 – 75 µm)
- Check with PPG technical service for the maximum allowable soluble salt level for water immersion service. This will vary based on the water chemistry and service temperatures

Concrete

- Remove all surface contaminants such as oil, grease, and embedded chemicals
- Abrade the surface per ASTM D4259 to remove all chalk and surface glaze or laitance
- Mechanical surface preparation should expose sub-surface voids and provide a surface profile equivalent to 80 grit sandpaper or coarser
- Surface should be free from moisture in accordance with ASTM D4263. Refer to Information Sheet # 1496ACUS for further details regarding moisture measurements

Stainless steel

- Abrasive blast with a hard angular abrasive to achieve a uniform and dense anchor profile of 1.5 – 3.0 mils (38 – 75 µm)

Substrate temperature and application conditions

- Surface temperature during application should be between 50°F (10°C) and 122°F (50°C)
- Surface temperature during application should be at least 5°F (3°C) above dew point
- Ambient temperature during application and curing should be between 50°F (10°C) and 122°F (50°C)
- Relative humidity during application should be between 0% and 85% (0% to 50% using dehumidification for tank linings)

SYSTEM SPECIFICATION

- Standard system is 2 full coats at 5-6 mils per coat + 2 stripe coats

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 4:1

- Pre-mix pigmented components with a pneumatic air mixer at moderate speeds to homogenize the container. Add hardener to base and agitate with a power mixer for 1–2 minutes until completely dispersed

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Application

- 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
- For tank lining, dehumidification equipment is highly recommended
- Provide shelter to prevent wind from affecting spray patterns
- Bulletin #1489 for further information on prevention, detection, and removal of amine blush

Material temperature

- Material temperature during application should be between 50°F (10°C) and 90°F (32°C)

Table of Induction time

Mixed product induction time	
Mixed product temperature	**Induction time**
50°F (10°C)	45 minutes
70°F (21°C)	30 minutes
90°F (32°C)	15 minutes

Pot life

4 hours at 70°F (21°C)

Note:

- See ADDITIONAL DATA – Pot life

Airless spray

- 45:1 pump or larger

Recommended thinner

THINNER 91-82 (AMERCOAT T-10)

Nozzle orifice

0.017 – 0.021 in (approx. 0.43 – 0.53 mm)

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Brush/roller

- Use a high quality polyester/nylon brush and/or a high quality 3/8" nap roller. In hot or dry conditions, layoff lightly rolling with 3/8" nap roller cover. Multiple coats may be required to achieve specified film thickness
- Spray application is required for tank linings with the exception of stripe coating and application for small repair areas

Recommended thinner

Thinner 91-82 (Amercoat T-10)

Cleaning solvent

- THINNER 90-58 (AMERCOAT 12)
- THINNER 91-82 (AMERCOAT T-10 THINNER)

ADDITIONAL DATA

Overcoating interval for DFT up to 5.0 mils (125 µm)							
Overcoating with...	**Interval**	**50°F (10°C)**	**60°F (16°C)**	**70°F (21°C)**	**80°F (27°C)**	**90°F (32°C)**	**100°F (38°C)**
itself	Minimum	24 hours	16 hours	10 hours	4 hours	4 hours	3 hours
	Maximum	7 days	6 days	5 days	4 days	3 days	3 days

Notes:

- Ensure previous coats are clean, dry and free of amine blush prior to application of subsequent coats
- Surface must be clean and dry. Any contamination must be identified and removed. 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
- 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

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Curing time for DFT up to 5.0 mils (125 µm)			
Substrate temperature	**Dry to touch**	**Dry to handle**	**Service- water immersion**
50°F (10°C)	8 hours	26 hours	14 days
60°F (16°C)	6 hours	20 hours	10 days
70°F (21°C)	4 hours	15 hours	7 days
90°F (32°C)	2 hours	6 hours	4 days
95°F (35°C)	105 minutes	4.5 hours	3.5 days
100°F (38°C)	1.5 hours	3 hours	3 days

Notes:

- Dry times are dependent on air and surface temperatures, as well as film thickness, ventilation, and relative humidity. Maximum recoating time is highly dependent on 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. 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 the surface.

Pot life (at application viscosity)	
Mixed product temperature	**Pot life**
50°F (10°C)	6 hours
70°F (21°C)	4 hours
90°F (32°C)	2 hours

Heat cure procedures

- Allow the final coat of the lining to achieve a dry hard condition prior to heating above 120°F (49°C)
- All adjacent tanks must be empty
- Do not heat cure until after holiday detection has been accomplished (when specified)
- Ramp heat at a rate of no greater than 2°F per minute until the target steel temperature is reached
- Surface temperatures must be measured at various elevations from top to bottom and in each cardinal direction. The lowest surface temperature must meet the minimum time/temperature requirements of the heat cure schedule. Record all temperatures

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Force Cure Schedule Based on Lowest Recorded Steel Temperature Readings	
Temperature	**Cure to Service value**
110°F (43°C)	3 days
120°F (49°C)	48 hours
130°F (54°C)	36 hours
140°F (60°C)	24 hours
150°F (66°C)	18 hours
160°F (71°C)	12 hours

SAFETY PRECAUTIONS

- 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
- Read all label and Safety Data Sheet (SDS) information prior to use

WORLDWIDE AVAILABILITY

It is always the aim of PPG Protective & Marine Coatings to supply the same product on a worldwide basis. However, 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.

REFERENCES

- Information sheet | Explanation of product data sheets

WARRANTY

LIMITATIONS OF LIABILITY

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AVAILABILITY OF PACKAGING

Depending on specific country of application the following versions are available:

Product	Color
AT 253-47	Light Blue
AT 253-3	White
AT 253-208	Gray
AT 253-B	Hardener
AT 253-77	Pastel Red