

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 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.

BASIC DATA AT 68°F (20°C)

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 80:20 (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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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

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
- Refer to INFORMATION SHEET 1434 for more details on ventilation requirements for tank lining applications

Material temperature

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

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)

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)



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Cleaning solvent

AMERCOAT 12 CLEANER or AMERCOAT T-10 THINNER

Note: All application equipment must be cleaned immediately after use

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:

- 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. 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
- Ensure previous coats are clean, dry and free of amine blush prior to application of subsequent coats

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

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

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Heat cure procedures

- Allow the final coat of the lining to achieve a dry hard condition prior to heating above 120°F (49°C)
- 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
- All adjacent tanks must be empty

Force Cure Schedule Based on Lowest Recorded Steel Temperature Readings

Temperature	Cure to service
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

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SAFETY PRECAUTIONS

- For paint and recommended thinners see INFORMATION SHEETS 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

WORLDWIDE AVAILABILITY

It is always the aim of PPG Protective and 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

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|---------------------------------------|-------------------|------|
| • CONVERSION TABLES | INFORMATION SHEET | 1410 |
| • EXPLANATION TO PRODUCT DATA SHEETS | INFORMATION SHEET | 1411 |
| • DIRECTIVES FOR VENTILATION PRACTICE | INFORMATION SHEET | 1434 |
| • SAFETY INDICATIONS | INFORMATION SHEET | 1430 |



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WARRANTY

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Packaging: Available in 1-gallon and 5-gallon kits

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

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