NOVAGUARD™ 810

DESCRIPTION

Two-component, solvent-free, amine rapid-cured novolac phenolic epoxy coating

PRINCIPAL CHARACTERISTICS

- One-coat tank coating system
- Excellent resistance to crude oil up to 90°C (194°F)
- Suitable for storage of unleaded gasolines
- Good chemical resistance against a wide range of chemicals and solvents
- Good visibility due to light color
- Dry heat resistance 120°C (250°F)
- Easy to clean
- Reduced explosion risk and fire hazard
- Hydrocarbon immersion after only 1 day at 20°C (68°F)

COLOR AND GLOSS LEVEL

- Light gray, cream, red oxide
- Semi-gloss

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.3 kg/l (11.0 lb/US gal)
Volume solids	98 ± 2%
VOC (Supplied)	EPA Method 24: 97.0 g/ltr (0.8 lb/USgal) max. 190.0 g/l (approx. 1.6 lb/US gal)
Recommended dry film thickness	300 - 1000 µm (12.0 - 40.0 mils) depending on system
Theoretical spreading rate	3.3 m^2/l for 300 µm (131 ft^2/US gal for 12.0 mils)
Dry to touch	4 hours
Overcoating Interval	Minimum: 6 hours Maximum: 28 days
Full cure after	48 hours
Shelf life	Base: at least 12 months when stored cool and dry Hardener: at least 12 months when stored cool and dry

Notes:
- See ADDITIONAL DATA – Spreading rate and film thickness
- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time

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RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Substrate conditions

- Steel; blast cleaned to a minimum of SSPC-SP10 or ISO-SA2½ , blasting profile 50 – 125 µm (5.0 mils) (2.0 – 5.0 mils)

Substrate temperature and application conditions

- Substrate temperature during application and curing down to 0°C (32°F) is acceptable; provided the substrate is free from ice and dry
- Substrate temperature during application and curing should be at least 3°C (5°F) above dew point

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 80:20 (4:1)

- The temperature of the mixed base and hardener should preferably be at least 40°C (104°F)
- At lower temperature, the viscosity will be too high for spray application
- No thinner should be added
- For recommended application instructions, see working procedure

Induction time

None

Airless spray

- Use heated, airless spray, plural-component equipment
- In-line heating or insulated hoses may be necessary to avoid cooling down of paint in hoses at low air temperature
- Length of hoses should be as short as possible

Recommended thinner

No thinner should be added

Nozzle orifice

Approx. 0.58 mm (0.023 in)

Nozzle pressure

28.0 MPa (approx. 280 bar; 4061 p.s.i.)

Notes:

- For optimal flow and leveling on horizontal areas having a substrate temperature below 20°C (68°F), the paint temperature (spray fan) should be kept typically below 30°C (86°F). The distance between the spray gun and the substrate should be low, for example less than 50 cm (20 inch)
- For optimal flow and sag resistance on vertical areas having a substrate temperature above 20°C (68°F), the paint temperature (spray fan) should be kept typically above 30°C (86°F)

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Cleaning solvent
THINNER 90-53 or THINNER 90-83

Note: All application equipment must be cleaned immediately after use. Paint inside the spraying equipment must be removed before the pot life has been expired.

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	**Theoretical spreading rate**
300 µm (12.0 mils)	3.3 m^2/l (131 ft^2/US gal)
600 µm (24.0 mils)	1.6 m^2/l (65 ft^2/US gal)

Measuring wet film thickness
- A difference is often obtained between the measured apparent WFT and the real applied WFT. This is due to the thixotropy and the surface tension of the paint, which retards the release of air, trapped in the paint film for some time
- Recommendation is to apply a WFT, which is equal to the specified DFT plus 60 µm (2.4 mils)

Measuring dry film thickness
- The DFT should be measured using a calibration foil of known thickness placed in between the coating and the measuring device

Overcoating interval for DFT up to 1000 µm (40.0 mils)						
Overcoating with...	**Interval**	**0°C (32°F)**	**10°C (50°F)**	**20°C (68°F)**	**30°C (86°F)**	**40°C (104°F)**
itself	Minimum	24 hours	12 hours	6 hours	4 hours	3 hours
	Maximum	28 days	28 days	28 days	28 days	14 days

Note: Surface should be dry and free from any contamination

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Curing time for DFT up to 1000 µm (40.0 mils)		
Substrate temperature	**Dry to handle**	**Full cure**
0°C (32°F)	3 days	9 days
5°C (41°F)	36 hours	5 days
10°C (50°F)	20 hours	3 days
20°C (68°F)	9 hours	48 hours
30°C (86°F)	7 hours	24 hours
40°C (104°F)	4 hours	12 hours

Notes:
- Adequate ventilation must be maintained during application and curing (please refer to INFORMATION SHEETS 1433 and 1434)
- For storage and transport of drinking water the recommended working procedure should be followed
- Holiday test can be done after dry to handle time
- Temperature must be maintained at or above 0°C (32°F) during cure window

SAFETY PRECAUTIONS

- For paint and recommended thinners see INFORMATION SHEETS 1430, 1431 and relevant Material Safety Data Sheets
- Although this is a solvent-free paint, care should be taken to avoid inhalation of spray mist, as well as contact between the wet paint and exposed skin or eyes
- No solvent present; however, spray mist is not harmless, a fresh air mask should be used during spraying
- Ventilation should be provided in confined spaces to maintain good visibility

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

• CONVERSION TABLES	INFORMATION SHEET	1410
• EXPLANATION TO PRODUCT DATA SHEETS	INFORMATION SHEET	1411
• SAFETY INDICATIONS	INFORMATION SHEET	1430
• SAFETY IN CONFINED SPACES AND HEALTH SAFETY, EXPLOSION HAZARD – TOXIC HAZARD	INFORMATION SHEET	1431
• SAFE WORKING IN CONFINED SPACES	INFORMATION SHEET	1433
• DIRECTIVES FOR VENTILATION PRACTICE	INFORMATION SHEET	1434
• CLEANING OF STEEL AND REMOVAL OF RUST	INFORMATION SHEET	1490
• SPECIFICATION FOR MINERAL ABRASIVES	INFORMATION SHEET	1491
• RELATIVE HUMIDITY – SUBSTRATE TEMPERATURE – AIR TEMPERATURE	INFORMATION SHEET	1650

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