PPG SIGMALINE™ 2500

DESCRIPTION

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

PRINCIPAL CHARACTERISTICS

- One-coat system direct to metal for pipe internals and externals
- Excellent resistance to cathodic protection
- Excellent resistance to crude oil up to 120°C (250°F)
- Glossy and smooth appearance
- Reduced explosion risk and fire hazard
- Fast-curing, especially when applied to preheated substrates
- Can be applied to rotating pipes at a dry-film thickness (DFT) up to 600 µm (24.0 mils) at a substrate temperature up to 90°C (194°F)

COLOR AND GLOSS LEVEL

- Dark brown
- Gloss

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.5 kg/l (12.5 lb/US gal)
Volume solids	100%
VOC (Supplied)	Directive 2010/75/EU, SED: max. 83.0 g/kg max. 125.0 g/l (approx. 1.0 lb/US gal)
Recommended dry film thickness	600 - 1000 µm (24.0 - 40.0 mils)
Theoretical spreading rate	1.7 m^2/l for 600 µm (67 ft^2/US gal for 24.0 mils) 1.0 m^2/l for 1000 µm (40 ft^2/US gal for 40.0 mils)
Dry to touch	30 minutes
Overcoating Interval	Minimum: 3 hours Maximum: 1 month
Full cure after	48 hours
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

PPG SIGMALINE™ 2500

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Substrate conditions

- Steel; blast cleaned to a minimum of ISO-Sa2½ (SSPC SP-10), blasting profile 50 – 100 µm (2.0 – 4.0 mils)

Substrate temperature and application conditions

- Substrate temperature during application and curing should be above 15°C (59°F)
- Substrate temperature during application and curing should be at least 3°C (5°F) above dew point
- Substrate temperature during automatic application between 40°C (104°F) and 60°C (140°F) is recommended, which will ensure good curing and appearance

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 4:1

- Application with twin-feed hot airless spray equipment

Induction time

0 minute

Note:

- No induction time required

Pot life

5 minutes at 50°C (122°F)

Note:

- See ADDITIONAL DATA – Pot life

PPG SIGMALINE™ 2500

Airless spray

- Twin-feed, hot airless spray
- Pumping viscosity is achieved at 40°C (104°F) to 60°C (140°F)
- Temperature in the mixing unit must be between 40°C (104°F) and 70°C (158°F)

Recommended thinner

No thinner should be added

Nozzle orifice

Approx. 0.48 – 0.78 mm (0.019 – 0.031 in)

Nozzle pressure

At 40°C (104°F) paint temperature min. 19.0 MPa (approx. 190 bar; 2756 p.s.i.). At 60°C (140°F) min. 15.0 MPa (approx. 150 bar; 2176 p.s.i.)

Note:

- Sag resistance depends on both paint and substrate temperature. Film build can be optimized by applying multiple passes wet-in-wet after allowing the previous pass to set

---

Brush/roller

- Only for touch-up and spot repair

Recommended thinner

No thinner should be added

Cleaning solvent

- THINNER 90-83 (preferred) or THINNER 90-53

Cleaning procedure

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

---

PPG SIGMALINE™ 2500

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	**Theoretical spreading rate**
600 µm (24.0 mils)	1.7 m^2/l (67 ft^2/US gal)
800 µm (32.0 mils)	1.3 m^2/l (50 ft^2/US gal)
1000 µm (40.0 mils)	1.0 m^2/l (40 ft^2/US gal)

Overcoating interval for DFT up to 600 µm (24.0 mils)				
Overcoating with...	**Interval**	**20°C (68°F)**	**30°C (86°F)**	**40°C (104°F)**
itself	Minimum	3 hours	1.5 hours	1 hour
	Maximum	1 month	1 month	1 month

Notes:

- Adequate ventilation must be maintained during application and curing
- When exposed to sunlight maximum interval is 2 days for all mentioned temperatures

Curing time for DFT up to 600 µm (24.0 mils)		
Substrate temperature	**Dry to handle**	**Full cure**
20°C (68°F)	3 hours	48 hours
30°C (86°F)	1.5 hours	24 hours
40°C (104°F)	1 hour	12 hours
50°C (122°F)	40 minutes	6 hours
60°C (140°F)	30 minutes	3 hours
70°C (158°F)	20 minutes	2 hours
90°C (194°F)	10 minutes	1 hour

Note:

- Adequate ventilation must be maintained during application and curing

PPG SIGMALINE™ 2500

Pot life (at application viscosity)	
Mixed product temperature	**Pot life**
20°C (68°F)	20 minutes
50°C (122°F)	5 minutes
60°C (140°F)	4 minutes
70°C (158°F)	3 minutes

Note:

- Due to exothermic reaction, temperature during and after mixing may increase

SAFETY PRECAUTIONS

- 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
- See Safety Data Sheet and product label for complete safety and precaution requirements
- Ventilation should be provided in confined spaces to maintain good visibility

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

PPG warrants (i) its title to the product, (ii) that the quality of the product conforms to PPG's specifications for such product in effect at the time of manufacture and (iii) that the product shall be delivered free of the rightful claim of any third person for infringement of any U.S. patent covering the product. THESE ARE THE ONLY WARRANTIES THAT PPG MAKES AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES, UNDER STATUTE OR ARISING OTHERWISE IN LAW, FROM A COURSE OF DEALING OR USAGE OF TRADE, INCLUDING WITHOUT LIMITATION, ANY OTHER WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR USE, ARE DISCLAIMED BY PPG. Any claim under this warranty must be made by Buyer to PPG in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life of the product, or one year from the date of the delivery of the product to the Buyer, whichever is earlier. Buyer's failure to notify PPG of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

LIMITATIONS OF LIABILITY

IN NO EVENT WILL PPG BE LIABLE UNDER ANY THEORY OF RECOVERY (WHETHER BASED ON NEGLIGENCE OF ANY KIND, STRICT LIABILITY OR TORT) FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IN ANY WAY RELATED TO, ARISING FROM, OR RESULTING FROM ANY USE MADE OF THE PRODUCT. The information in this sheet is intended for guidance only and is based upon laboratory tests that PPG believes to be reliable. PPG may modify the information contained herein at any time as a result of practical experience and continuous product development. All recommendations or suggestions relating to the use of the PPG product, whether in technical documentation, or in response to a specific inquiry, or otherwise, are based on data, which to the best of PPG's knowledge, is reliable. The product and related information is designed for users having the requisite knowledge and industrial skills in the industry and it is the end-user's responsibility to determine the suitability of the product for its own particular use and it shall be deemed that Buyer has done so, as its sole discretion and risk. PPG has no control over either the quality or condition of the substrate, or the many factors affecting the use and application of the product. Therefore, PPG does not accept any liability arising from any loss, injury or damage resulting from such use or the contents of this information (unless there are written agreements stating otherwise). Variations in the application environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results. This sheet supersedes all previous versions and it is the Buyer's responsibility to ensure that this information is current prior to using the product. Current sheets for all PPG Protective & Marine Coatings Products are maintained at www.ppgpmc.com. The English text of this sheet shall prevail over any translation thereof.