PPG SIGMALINE™ 2000

DESCRIPTION

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

PRINCIPAL CHARACTERISTICS

- One-coat system direct to metal for pipe externals
- Suitable for e.g. bell holing jobs
- Resistant to well designed cathodic protection
- Glossy and smooth appearance
- Can be applied by heavy-duty, twin-feed, hot, airless spray equipment
- Can be applied at a substrate temperature of 90°C (194°F)
- Reduced explosion risk and fire hazard
- Meets the requirements of EN10289

COLOR AND GLOSS LEVEL

- Redbrown
- Gloss

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.4 kg/l (11.7 lb/US gal)
Volume solids	100%
VOC (Supplied)	Directive 2010/75/EU, SED: max. 108.0 g/kg max. 146.0 g/l (approx. 1.2 lb/US gal)
Recommended dry film thickness	600 - 1500 µm (24.0 - 60.0 mils) depending on system
Theoretical spreading rate	1.7 m^2/l for 600 µm (67 ft^2/US gal for 24.0 mils)
Dry to touch	6 hours
Overcoating Interval	Minimum: 24 hours Maximum: 2 months
Full cure after	5 days
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 – Spreading rate and film thickness
- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time

PPG SIGMALINE™ 2000

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Substrate conditions

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

Substrate temperature

- Substrate temperature during application and curing should be above 5°C (41°F)
- 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 4:1

- When mixing, the temperature of the base and hardener should be at least 20°C (68°F)
- At lower temperature, the viscosity will be too high for spray application
- No thinner should be added

Induction time

0 minute

Note:

- No induction time required

Pot life

1 hour at 20°C (68°F)

Note:

- See ADDITIONAL DATA – Pot life

PPG SIGMALINE™ 2000

Airless spray

Recommended thinner

No thinner should be added

Nozzle orifice

Approx. 0.53 mm (0.021 in)

Nozzle pressure

At 20°C (68°F) paint temperature min. 28.0 MPa (approx. 280 bar; 4061 p.s.i.). At 30°C (86°F) min. 22.0 MPa (approx. 220 bar; 3191 p.s.i.)

Notes:

- Use heavy-duty, single-feed, airless spray equipment, preferably 60:1 pump ratio and suitable high-pressure hoses
- Length of hoses should be as short as possible
- In-line heating or insulated hoses may be necessary to avoid cooling down of paint in hoses at low air temperature

---

Brush/roller

- For stripe coating and spot repair only

Recommended thinner

No thinner should be added

Cleaning solvent

- THINNER 90-53 or THINNER 90-83
- 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

Maximum dry film thickness

- The DFT should be measured using a calibration foil of known thickness placed in between the coating and the measuring device
- Because of low initial hardness the DFT cannot be measured within some days, due to the penetration of the measuring device into the soft paint film

Measuring wet film thickness

- A deviation is often obtained between the measured apparent WFT and the real applied WFT
- 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)

PPG SIGMALINE™ 2000

Spreading rate and film thickness	
DFT	**Theoretical spreading rate**
600 µm (24.0 mils)	1.7 m^2/l (67 ft^2/US gal)
1000 µm (40.0 mils)	1.0 m^2/l (40 ft^2/US gal)
1500 µm (60.0 mils)	0.7 m^2/l (27 ft^2/US gal)

Note:

- Maximum DFT when brushing: 150 µm (6.0 mils)

Overcoating interval for DFT up to 600 µm (24.0 mils)					
Overcoating with...	**Interval**	**5°C (41°F)**	**10°C (50°F)**	**20°C (68°F)**	**30°C (86°F)**
itself for repair only	Minimum	3.5 days	36 hours	24 hours	12 hours
	Maximum	3 months	3 months	2 months	1 month

Note:

- Surface should be dry and free from any contamination

Curing time for DFT up to 600 µm (24.0 mils)		
Substrate temperature	**Dry to handle**	**Full cure**
5°C (41°F)	60 hours	15 days
10°C (50°F)	30 hours	7 days
20°C (68°F)	16 hours	5 days
30°C (86°F)	10 hours	3 days

Note:

- Adequate ventilation must be maintained during application and curing

PPG SIGMALINE™ 2000

Pot life (at application viscosity)	
Mixed product temperature	**Pot life**
20°C (68°F)	1 hour
30°C (86°F)	45 minutes
40°C (104°F)	20 minutes

Notes:

- Due to exothermic reaction, temperature during and after mixing may increase
- It is recommended to use plural airless equipment due to the short pot life when paint temperature is above 40°C (104°F)

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

LIMITATIONS OF LIABILITY