

SIGMACOVER™ 1500

DESCRIPTION

Two-component, surface-tolerant, solvent-free, polyamine-cured epoxy primer/coating

PRINCIPAL CHARACTERISTICS

- General-purpose primer/buildcoat for long-term protection of steel structures
- Excellent corrosion resistance
- Compatible with various aged coatings, like aged alkyd, epoxy and polyurethane
- Reduces explosion risk and fire hazard in confined spaces
- Good flow and wetting properties
- Can be used at temperatures above 5°C (41°F)
- Can be applied by roller

COLOR AND GLOSS LEVEL

- Gray
- 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	99 ± 1%
VOC (Supplied)	Directive 1999/13/EC, SED: max. 2.0 g/kg max. 3.0 g/l (approx. 0.0 lb/US gal)
Recommended dry film thickness	125 µm (5.0 mils)
Theoretical spreading rate	7.9 m ² /l for 125 µm (318 ft ² /US gal for 5.0 mils)
Dry to touch	12 hours
Overcoating Interval	Minimum: 24 hours Maximum: 1 month
Full cure after	7 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

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RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Substrate conditions

- Steel; blast cleaned to ISO-Sa2½ for excellent corrosion protection
- Steel; blast cleaned to ISO-Sa2 or power tool cleaned to ISO-St2 for good corrosion protection
- Steel with approved zinc silicate shop primer; sweep blasted to SPSS-Ss or power tool cleaned to SPSS-Pt3
- Stainless steel; degreased and blast cleaned to roughness of 40 – 70 µm (1.5 – 2.8 mils)
- Existing sound epoxy coating, polyurethane and most sound alkyd coating systems; sufficiently roughened dry and cleaned

Substrate temperature and application conditions

- 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
- Relative humidity during application and curing should not exceed 80%

INSTRUCTIONS FOR USE

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

- For airless application, the temperature of base and hardener should be at least 20°C (68°F)
- Lower temperatures possible for roller application
- No thinner should be added

Induction time

None

Pot life

1 hour at 20°C (68°F)

Note: See ADDITIONAL DATA – Pot life

Airless spray

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

Recommended thinner

No thinner should be added

Nozzle orifice

Approx. 0.43 mm (0.017 in)

Nozzle pressure

15.0 MPa (approx. 150 bar; 2176 p.s.i.)



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Brush/roller

- Roller: nylon suitable for two-component epoxy with hair length 8 mm (0.315 in)
- Brush: for stripe coating and spot repair only

Recommended thinner

No thinner should be added

Cleaning solvent

THINNER 90-53 or THINNER 90-83

Notes:

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

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	Theoretical spreading rate
125 µm (5.0 mils)	7.9 m ² /l (318 ft ² /US gal)

Note: Maximum DFT when brushing: 100 µm (4.0 mils)

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

Measuring dry film thickness

- Because of low initial hardness the DFT cannot be measured for some days (depending on ambient temperature) after application, due to the penetration of the measuring device into the paint film
- The DFT should be measured using a calibration foil of known thickness placed in between the coating and the measuring device

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Overcoating interval for DFT up to 125 µm (5.0 mils)						
Overcoating with...	Interval	5°C (41°F)	10°C (50°F)	20°C (68°F)	30°C (86°F)	40°C (104°F)
SIGMACOVER 1500, SIGMACOVER 456, SIGMACOVER 435 and polyurethanes	Minimum	3 days	48 hours	24 hours	16 hours	12 hours
	Maximum exposed to direct sunshine	1 month	1 month	1 month	1 month	1 month
	Maximum NOT exposed to direct sunshine	1 month	1 month	1 month	1 month	1 month

Notes:

- Surface should be dry and free from any contamination
- Best intercoat adhesion occurs when the subsequent coat is applied before the fully cured stage is reached
- If this time is exceeded the surface has to be roughened

Curing time for DFT up to 125 µm (5.0 mils)			
Substrate temperature	Dry to touch	Dry to handle	Full cure
5°C (41°F)	48 hours	3 days	21 days
10°C (50°F)	24 hours	48 hours	14 days
20°C (68°F)	12 hours	24 hours	7 days
30°C (86°F)	8 hours	16 hours	3 days
40°C (104°F)	6 hours	12 hours	48 hours

Note: Adequate ventilation must be maintained during application and curing (please refer to INFORMATION SHEETS 1433 and 1434)

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

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

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
- Spray mist is not harmless, a fresh air mask and gloves should be used during spraying
- Ventilation should be provided in confined spaces to maintain good visibility

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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

• 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

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