

SIGMACOVER 1500

4 pages

September 2009
Revision of September 2005

DESCRIPTION	two component surface tolerant solvent free polyamine cured epoxy primer/ coating
PRINCIPAL CHARACTERISTICS	<ul style="list-style-type: none"> - general purpose primer/buildcoat for long term protection of steel structures - excellent corrosion resistance - compatible with various aged coating like aged alkyd, epoxy and polyurethane - reduces explosion risk and fire hazard in confined spaces - good flow and wetting properties - can be used from temperatures above 5°C - can be applied by roller
COLOURS AND GLOSS	grey - gloss
BASIC DATA AT 20°C	(1 g/cm ³ = 8.25 lb/US gal; 1 m ² /l = 40.7 ft ² /US gal) (data for mixed product)
Mass density	1.4 g/cm ³
Volume solids	99 ± 1%
VOC (supplied)	max. 2 g/kg (Directive 1999/13/EC, SED) max. 3 g/l (approx. 0.0 lb/gal) see information sheet 1411
Recommended dry film thickness	125 µm
Theoretical spreading rate	7.9 m ² /l for 125 µm
Touch dry after	12 hours *
Overcoating interval	max. see tables * min. see tables *
Full cure after	7 days *
	(data for components)
Shelf life (cool and dry place)	at least 12 months * see additional data
RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES	<ul style="list-style-type: none"> - 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 - existing sound epoxy coating, polyurethane and most sound alkyd coating systems; sufficiently roughened dry and cleaned - substrate temperature should be above 5°C and at least 3°C above dew point during application and curing - maximum relative humidity during application and curing is 80%

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INSTRUCTIONS FOR USE	<p>mixing ratio by volume: base to hardener 80 : 20</p> <ul style="list-style-type: none"> - for airless application the temperature of base and hardener should be at least 20°C - lower temperatures possible for roller application - no thinner should be added
Induction time	none
Pot life	approx. 1 hour at 20°C * * see additional data
AIRLESS SPRAY	<ul style="list-style-type: none"> - 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	at 20°C (paint temperature) min. 15 MPa (= approx. 150 bar; 2130 p.s.i.)
BRUSH/ROLLER	<p>ROLLER: nylon suitable for 2 component epoxy with hair length 8 mm</p> <p>BRUSH: for stripe coating and spot repair only</p>
Recommended thinner	no thinner should be added
CLEANING SOLVENT	<p>Thinner 90-83 (preferred) or Thinner 90-53</p> <ul style="list-style-type: none"> - all equipment used for application must be cleaned immediately after use - paint inside the spraying equipment must be removed before the pot life time has been expired
SAFETY PRECAUTIONS	<p>for paint and recommended thinners see safety sheets 1430, 1431 and relevant material safety data sheets</p> <p>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</p> <ul style="list-style-type: none"> - 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
ADDITIONAL DATA	<p>Film thickness and spreading rate</p> <p>max. dft when brushing: 100 µm</p> <p>measuring wet film thickness</p> <ul style="list-style-type: none"> - 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

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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

Overcoating table for dft up to 125 µm

substrate temperature	5°C	10°C	20°C	30°C	40°C
minimum interval	3 days	48 hours	24 hours	16 hours	12 hours
maximum interval when not exposed to direct sunshine	1 month				
maximum interval when exposed to direct sunshine	1 month				

SigmaCover 1500, SigmaCover 456, SigmaCover 435 and polyurethanes

- 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 table for dft up to 125 µm

substrate temperature	touch dry	dry to handle	full cure
5°C	48 hours	3 days	21 days
10°C	24 hours	2 days	14 days
20°C	12 hours	24 hours	7 days
30°C	8 hours	16 hours	3 days
40°C	6 hours	12 hours	2 days

- adequate ventilation must be maintained during application and curing (please refer to sheets 1433 and 1434)

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Pot life (at application viscosity)

20°C	60 min.
30°C	30 min.

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

Worldwide availability

Whilst it is always the aim of PPG Protective & Marine Coatings to supply the same product on a worldwide basis, 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	see information sheet 1411
Safety indications	see information sheet 1430
Safety in confined spaces and health safety	
Explosion hazard - toxic hazard	see information sheet 1431
Safe working in confined spaces	see information sheet 1433
Directives for ventilation practice	see information sheet 1434

LIMITATION OF LIABILITY

The information in this data sheet is based upon laboratory tests we believe to be accurate and is intended for guidance only. All recommendations or suggestions relating to the use of the Sigma Coatings products made by PPG Protective & Marine Coatings, whether in technical documentation, or in response to a specific enquiry, or otherwise, are based on data which to the best of our knowledge are reliable. The products and information are designed for users having the requisite knowledge and industrial skills and it is the end-user's responsibility to determine the suitability of the product for its intended use.

PPG Protective & Marine Coatings has no control over either the quality or condition of the substrate, or the many factors affecting the use and application of the product. PPG Protective & Marine Coatings does therefore not accept any liability arising from loss, injury or damage resulting from such use or the contents of this data sheet (unless there are written agreements stating otherwise).

The data contained herein are liable to modification as a result of practical experience and continuous product development.

This data sheet replaces and annuls all previous issues and it is therefore the user's responsibility to ensure that this sheet is current prior to using the product.

The English text of this document shall prevail over any translation thereof.

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