

SIGMACOVER 456 HS

4 pages

September 2009
Revision of April 2008

DESCRIPTION	two component high solids polyamide cured recoatable zinc phosphate epoxy primer/coating
PRINCIPAL CHARACTERISTICS	<ul style="list-style-type: none"> - general purpose epoxy primer/coating for steel and concrete structures in atmospheric exposure - can be recoated with various two component and conventional coatings even after long weathering periods - free from lead and chromate containing pigments - excellent rust preventing properties in industrial or coastal atmospheres - tough, with long term flexibility - cures at temperatures down to -5°C - good adhesion to steel - easy application, both by airless spray and brush
COLOURS AND GLOSS	cream (other colours on request) - eggshell
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	73 ± 2%
VOC (supplied)	max. 192 g/kg (Directive 1999/13/EC, SED) max. 277 g/l (approx. 2.3 lb/gal)
Recommended dry film thickness	75 - 150 µm depending on system
Theoretical spreading rate	7.3 m ² /l for 100 µm *
Touch dry after	8 hours
Overcoating interval	min. 8 hours * max. unlimited
Full cure after	4 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, blasting profile 40 - 70 µm - previous suitable coat; dry and free from any contamination - during application and curing a substrate temperature down to -5°C is acceptable provided the substrate is dry and free from ice - substrate temperature should be at least 3°C above dew point

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INSTRUCTIONS FOR USE

mixing ratio by volume: base to hardener 80 : 20

- the temperature of the mixed base and hardener should preferably be above 15°C, otherwise extra solvent may be required to obtain application viscosity
- too much solvent results in reduced sag resistance
- thinner should be added after mixing the components

Induction time

20 minutes if applied at temperatures below 10°C
none above 10°C

Pot life

4 hours at 20°C *
* see additional data

AIRLESS SPRAY

Recommended thinner

Thinner 91-92

Volume of thinner

0 - 5%, depending on required thickness and application conditions

Nozzle orifice

approx. 0.48 mm (= 0.019 in)

Nozzle pressure

15 MPa (= approx. 150 bar; 2130 p.s.i.)

AIR SPRAY

Recommended thinner

Thinner 91-92

Volume of thinner

0 - 10%, depending on required thickness and application conditions

Nozzle orifice

1.5 - 3 mm

Nozzle pressure

0.3 - 0.4 MPa (= approx. 3 - 4 bar; 43 - 57 p.s.i.)

BRUSH/ROLLER

Recommended thinner

Thinner 91-92

Volume of thinner

0 - 5%

CLEANING SOLVENT

Thinner 90-53

SAFETY PRECAUTIONS

for paint and recommended thinners see safety sheets 1430, 1431 and relevant material safety data sheets

this is a solvent borne paint and care should be taken to avoid inhalation of spray mist or vapour as well as contact between the wet paint and exposed skin or eyes

ADDITIONAL DATA

Film thickness and spreading rate

theoretical spreading rate m ² /l	9.7	7.3	4.9
dft in µm	75	100	150

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Overcoating table for SigmaCover 456 HS for dft up to 150 µm

substrate temperature	-5°C	5°C	10°C	20°C	30°C	40°C
minimum interval	48 hours	20 hours	16 hours	8 hours	6 hours	4 hours
maximum interval	unlimited					

- surface should be dry and free from any contamination
- for polyurethane paints the minimum overcoating time should be raised with 100%

Curing table for dft up to 150 µm

substrate temperature	dry to handle	full cure
-5°C	24 - 48 hours	14 days
0°C	24 - 30 hours	10 days
5°C	18 - 24 hours	8 days
10°C	18 hours	6 days
15°C	12 hours	5 days
20°C	8 hours	4 days
30°C	6 hours	3 days
40°C	4 hours	2 days

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

Pot life (at application viscosity)

10°C	8 hours
15°C	5 hours
20°C	4 hours
30°C	2.5 hours
35°C	2 hours

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.

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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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