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

- 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/cm³ = 8.25 lb/US gal; 1 m²/l = 40.7 ft²/US gal)
(data for mixed product)

Mass density	1.4 g/cm³
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 m²/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

- 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 m²/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

	PDS	7712
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