SIGMACOVER 456

(SIGMA CM COATING - SIGMACOVER CM COATING)

5 pages

September 2005
Revision of September 2004

DESCRIPTION

two component high build polyamide cured recoatable epoxy coating

PRINCIPAL CHARACTERISTICS

- general purpose epoxy build coat or finish in protective coating systems for steel and concrete structures exposed to atmospheric land or marine conditions
- easy application, both by airless spray and brush
- cures even at temperatures down to -10°C
- a high relative humidity max. 95%, during application and curing does not influence the quality of the coating
- good adhesion on most aged, sound alkyd-, chlorinated rubber- and epoxy coatings
- can be recoated with various two component and conventional coatings even after long weathering periods
- resistant to water and splash of mild chemicals
- excellent durability
- tough, with long term flexibility

COLOURS AND GLOSS

white and various other colours (see also Marine shade card) - semigloss

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	65 ± 2% (white); 62 - 65 ± 2% (colours)
VOC (supplied)	max. 250 g/kg (Directive 1999/13/EC, SED) max. 347 g/l (approx. 2.9 lb/gal)
Recommended dry film thickness	75 - 150 µm depending on system
Theoretical spreading rate	6.5 m²/l for 100 µm, 8.7 m²/l for 75 µm *
Touch dry after	2 hours
Overcoating interval	min. 3 hours * max. unlimited
Curing time	4 days *

(data for components)

Shelf life (cool and dry place)	at least 24 months
Flash point	base 26°C, hardener 26.5°C

* see additional data

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RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- previous coat; dry and free from any contamination
- during application and curing a substrate temperature down to -10°C is acceptable provided substrate is dry and free from ice
- substrate temperature should be at least 3°C above dew point

SYSTEM SPECIFICATION

marine — system sheets 3102, 3103, 3104, 3105

INSTRUCTIONS FOR USE

mixing ratio by volume: base to hardener 82 : 18

- the temperature of the mixed base and hardener should preferably be above 10°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: none

Pot life: 6 hours at 20°C
* see additional data

AIRLESS SPRAY

Recommended thinner	Sigma thinner 91-92
Volume of thinner	0 - 5%, depending on required thickness and application conditions
Nozzle orifice	approx. 0.48 - 0.58 mm (= 0.019 - 0.023 in)
Nozzle pressure	15 MPa (= approx. 150 bar; 2130 p.s.i.)

AIR SPRAY

Recommended thinner	Sigma thinner 91-92
Volume of thinner	5 - 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	Sigma thinner 91-92
Volume of thinner	0 - 5%

CLEANING SOLVENT

Sigma 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 based 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

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ADDITIONAL DATA

Film thickness and spreading rate

theoretical spreading rate m²/l	8.7	6.5	4.3
dft in µm	75	100	150

max. dft when brushing: 60 µm

Overcoating table at 75 µm dft

for SigmaCover 435, SigmaCover 456

substrate temperature	-5°C	5°C	10°C	20°C	30°C	40°C
minimum interval	36 hours	10 hours	4 hours	3 hours	2 hours	2 hours
maximum interval	no limitation					

– surface should be dry and free from chalking and contamination

Overcoating table at 75 µm dft

for various chlorinated rubbers and vinyls, Sigma Vikote 46, SigmaDur 550, SigmaDur 520 and Sigmarine 40

substrate temperature	-5°C	5°C	10°C	20°C	30°C	40°C
minimum interval	72 hours	24 hours	16 hours	8 hours	5 hours	3 hours
maximum interval	no limitation					
maximum interval	17 days	14 days	10 days	7 days	4 days	2 days

for Sigma Vikote 56 * and Sigmarine 48 *

– surface should be dry and free from chalking and contamination
– finishes require a corresponding undercoat
– SigmaCover 456 should not be overcoated with coal tar epoxy coatings

*** colour of SigmaCover 456 should be adapted to the colour of Sigma Vikote 56 or Sigmarine 48**

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Curing table

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

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

Pot life (at application viscosity)

10°C	12 hours
20°C	6 hours
30°C	4 hours
40°C	2 hours

Worldwide availability

Whilst it is always the aim of Sigma 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

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The data contained herein are liable to modification as a result of practical experience and continous 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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