SIGMACOVER 650

5 pages

January 2007
Revision of November 2006

DESCRIPTION

two component surface tolerant high build polyamine cured epoxy primer/ coating

PRINCIPAL CHARACTERISTICS

- surface tolerant coating for lower grade of steel preparation
- particularly suited as maintenance coating for dry cargo holds, decks and hulls
- good impact and abrasion resistance
- compatible with various aged coatings
- excellent corrosion resistance
- resistant to splash and spillage of a wide range of chemicals
- good flexibility

COLOURS AND GLOSS

grey, redbrown, aluminium - 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	1.5 g/cm³
Volume solids	78 ± 2%
VOC (supplied)	max. 163 g/kg (Directive 1999/13/EC, SED) max. 237 g/l (approx. 2.0 lb/gal)
Recommended dry film thickness	125 - 200 µm * depending on system and application method
Theoretical spreading rate	6.2 m²/l for 125 µm, 3.9 m²/l for 200 µm *
Touch dry after	4 hours
Overcoating interval	min. see tables * max. see tables *
Curing time	7 days
	(data for components)
Shelf life (cool and dry place)	at least 12 months

* see additional data

SIGMACOVER 650

January 2007

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

– **for atmospheric exposure 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
  - shop primed steel; pretreated to SPSS-Pt3
  - existing sound epoxy coating systems and most sound alkyd coating systems; sufficiently roughened, dry and free from any contamination
– **for immersion in seawater:**
  (resistant to Cathodic Protection in systems)
  - steel; blast cleaned to ISO-Sa2½
  - steel with approved zinc silicate shop primer; sweep blasted to SPSS-Ss or power tool cleaned to SPSS-Pt3
  - **first coat** should be SigmaCover 650 aluminium
– substrate temperature should be above 5°C and at least 3°C above dew point

SYSTEM SPECIFICATION

2 x 125 µm SigmaCover 650

INSTRUCTIONS FOR USE

mixing ratio by volume: base to hardener 75 : 25

– 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 and slower cure
– thinner should be added after mixing the components

Induction time: none

Pot life: 2 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 - 0.53 mm (= 0.019 - 0.021 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	1.8 - 2 mm
Nozzle pressure	0.3 - 0.4 MPa (= approx. 3 - 4 bar; 43 - 57 p.s.i.)

SIGMACOVER 650

January 2007

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

ADDITIONAL DATA

Film thickness and spreading rate

theoretical spreading rate m²/l	6.2	3.9
dft in µm	125	200

max. dft when brushing: 100 µm

Overcoating table for SigmaCover 650 for dft up to 150 µm

	substrate temperature	5°C	10°C	20°C	30°C	40°C
with epoxy coatings	minimum interval	12 hours	10 hours	7 hours	4 hours	3 hours
with polyurethanes	minimum interval	18 hours	15 hours	11 hours	6 hours	4.5 hours
with itself, various epoxy- and polyurethane coatings	maximum interval	6 months	4 months	2 months	1 month	1 month

- surface should be dry and free from any contamination
- after exceeding of the maximum interval, glossy finishes require a corresponding undercoat
- best intercoat adhesion occurs when the subsequent coat is applied before the preceding coat is fully cured
- if this time is exceeded it may be necessary to roughen the surface

SIGMACOVER 650

January 2007

Curing table for SigmaCover 650 for dft up to 150 µm

substrate temperature	touch dry	dry to handle	full cure
5°C	6 hours	12 hours	25 days
10°C	5 hours	10 hours	15 days
20°C	4 hours	7 hours	7 days
30°C	3 hours	4 hours	4 days
40°C	2 hours	3 hours	2 days

- for cargo hold application: for full cure for hard angular cargoes, please contact your nearest SigmaKalon Marine & Protective Coatings sales office
- adequate ventilation to remove solvent must be maintained during application and curing (please refer to sheet 1433 and 1434)
- should SigmaCover 650 or the total coating system (2 x 125 µm) be applied in excess of the specified dry film thickness, than the time necessary to reach full cure will be increased

Pot life (at application viscosity)

15°C	3 hours
20°C	2 hours
30°C	1 hour

Worldwide availability

Whilst it is always the aim of SigmaKalon Marine & Protective 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

SIGMACOVER 650

January 2007

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 SigmaKalon Marine & Protective 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.

SigmaKalon Marine & Protective 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. SigmaKalon Marine & Protective 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 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.

	PDS	7431
238210	grey	5177052200
239061	redbrown	6179052200