SIGMA NOVAGUARD 200

4 pages

September 2005
Revision of January 2003

DESCRIPTION

two component solvent free epoxy coating

PRINCIPAL CHARACTERISTICS

- two coat cargo tank coating system with good chemical resistance against a wide range of products
- complies with all legislative rulings on VOC emissions
- good visibility due to light colour
- easy to clean
- eliminates explosion risk and fire hazard
- good edge covering capacity

COLOURS AND GLOSS

blue, green - gloss

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	1.3 g/cm³
Volume solids	100%
VOC (supplied)	max. 105 g/kg (Directive 1999/13/EC, SED) max. 142 g/l (approx. 1.2 lb/gal) see information sheet 1411
Recommended dry film thickness	150 µm per coat
Theoretical spreading rate	6.7 m²/l for 150 µm *
Touch dry after	6 hours
Overcoating interval	min. 24 hours * max. 2 months *
Full cure after	see curing table *

(data for components)

Shelf life (cool and dry place)	at least 12 months
Flash point	base and hardener above 65°C

* see additional data

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- steel; blast cleaned to a minimum of ISO-Sa2½, blasting profile (R_z) 50 - 100 µm
- substrate temperature must be above 10°C and at least 3°C above dew point during application and curing

SYSTEM SPECIFICATION

marine — system sheet 3328

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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 at least 20°C
- at lower temperature the viscosity will be too high for spray application
- no thinner should be added
- for recommended application instructions: see working procedure

Induction time: none

Pot life: 1 hour at 20°C *
* see additional data

AIRLESS SPRAY

- use 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
- application with 45:1 airless spray equipment is possible provided in-line heated high pressure hoses are used
- length of hoses should be as short as possible

Recommended thinner: no thinner should be added
Nozzle orifice: approx. 0.53 mm (= 0.021 in)
Nozzle pressure: at 20°C (paint temperature) min. 28 MPa (= approx. 280 bar; 4000 p.s.i.)
at 30°C (paint temperature) min. 22 MPa (= approx. 220 bar; 3000 p.s.i.)

BRUSH/ROLLER

for stripe coating and spot repair only

Recommended thinner: no thinner should be added

CLEANING SOLVENT

Sigma thinner 90-83 (preferred) or Sigma thinner 90-53

- 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

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

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

- no solvent present; however, spray mist is not harmless, a fresh air mask should be used during spraying
- ventilation should be provided in confined spaces to maintain good visibility

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ADDITIONAL DATA

Film thickness and spreading rate

theoretical spreading rate m²/l	6.7
dft in µm	150

max. dft when brushing: 150 - 200 µm

measuring wet film thickness

– a deviation 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
– recommendation is to apply a wft which is equal to the specified dft plus 60 µm

measuring dry film thickness

– because of low initial hardness the dft cannot be measured within some days due to the penetration of the measuring device into the soft paint film
– the dft should be measured using a calibration foil of known thickness placed in between the coating and the measuring device

Overcoating with Sigma Novaguard 200

substrate temperature	10°C	20°C	30°C
minimum interval	36 hours	24 hours	16 hours
maximum interval	3 months	2 months	1 month

– surface should be dry and free from any contamination

Curing table

substrate temperature	dry to handle	full cure
10°C	30 hours	7 days
20°C	16 hours	5 days
30°C	10 hours	3 days

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

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Pot life (at application viscosity)

20°C	60 min.
30°C	45 min.

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

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
Specification for mineral abrasives	see information sheet 1491

DS	7462
179156 blue	1000002200
179157 green	4000002200

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