

# SIGMA NOVAGUARD 200

4 pages

September 2005  
Revision of January 2003

|                                                          |                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DESCRIPTION</b>                                       | two component solvent free epoxy coating                                                                                                                                                                                                                                                                                                                                                    |
| <b>PRINCIPAL CHARACTERISTICS</b>                         | <ul style="list-style-type: none"> <li>– two coat cargo tank coating system with good chemical resistance against a wide range of products</li> <li>– complies with all legislative rulings on VOC emissions</li> <li>– good visibility due to light colour</li> <li>– easy to clean</li> <li>– eliminates explosion risk and fire hazard</li> <li>– good edge covering capacity</li> </ul> |
| <b>COLOURS AND GLOSS</b>                                 | blue, green - gloss                                                                                                                                                                                                                                                                                                                                                                         |
| <b>BASIC DATA AT 20°C</b>                                | (1 g/cm <sup>3</sup> = 8.25 lb/US gal; 1 m <sup>2</sup> /l = 40.7 ft <sup>2</sup> /US gal)<br>(data for mixed product)                                                                                                                                                                                                                                                                      |
| Mass density                                             | 1.3 g/cm <sup>3</sup>                                                                                                                                                                                                                                                                                                                                                                       |
| Volume solids                                            | 100%                                                                                                                                                                                                                                                                                                                                                                                        |
| VOC (supplied)                                           | max. 105 g/kg (Directive 1999/13/EC, SED)<br>max. 142 g/l (approx. 1.2 lb/gal)<br>see information sheet 1411                                                                                                                                                                                                                                                                                |
| Recommended dry film thickness                           | 150 µm per coat                                                                                                                                                                                                                                                                                                                                                                             |
| Theoretical spreading rate                               | 6.7 m <sup>2</sup> /l for 150 µm *                                                                                                                                                                                                                                                                                                                                                          |
| Touch dry after                                          | 6 hours                                                                                                                                                                                                                                                                                                                                                                                     |
| Overcoating interval                                     | min. 24 hours *<br>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<br>* see additional data                                                                                                                                                                                                                                                                                                                                       |
| <b>RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES</b> | <ul style="list-style-type: none"> <li>– steel; blast cleaned to a minimum of ISO-Sa2½, blasting profile (R<sub>z</sub>) 50 - 100 µm</li> <li>– substrate temperature must be above 10°C and at least 3°C above dew point during application and curing</li> </ul>                                                                                                                          |
| <b>SYSTEM SPECIFICATION</b>                              | marine <span style="float: right;">system sheet 3328</span>                                                                                                                                                                                                                                                                                                                                 |

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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 m <sup>2</sup> /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 |

**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 products made by Sigma 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.

Sigma 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. Sigma 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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| 179157 green | 4000002200 |