SIGMALINE 855

(SIGMALINING 7655)

4 pages

November 2005
Revision of September 2004

DESCRIPTION

two component solvent free polyurethane coating

PRINCIPAL CHARACTERISTICS

- solvent free coating for the protection of external of pipelines and underground storage tanks
- certified to GBE/CW6 Part 1, meets EN10290
- excellent corrosion resistance
- fast curing
- good abrasion and impact resistance
- excellent adhesion
- good water resistance

COLOURS AND GLOSS

blue, grey, redbrown - 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	1.7 g/cm³
Volume solids	100%
VOC (supplied)	max. 1 g/kg (Directive 1999/13/EC, SED) max. 2 g/l (approx. 0.0 lb/gal) see information sheet 1411
Recommended dry film thickness	1500 µm in one coat
Theoretical spreading rate	0.7 m²/l for 1500 µm *
Touch dry after	30 minutes
Full cure after	4 days *

(data for components)

Shelf life (cool and dry place)	at least 6 months
Flash point	base and hardener above 65°C

* see additional data

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- steel; blast cleaned to ISO-Sa2½, blasting profile (R_z) 40 - 70 µm
- substrate temperature should be above 15°C and at least 3°C above dew point, lower temperatures will reduce flow properties
- for atmospheric exposure a top coat of SigmaDur 520 is recommended

INSTRUCTIONS FOR USE

mixing ratio by volume: base to hardener 80 : 20

- application with twin feed hot airless spray equipment
- no thinner should be added

Induction time: none

Pot life: 1 min. at 60°C *

* see additional data

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AIRLESS SPRAY

- twin feed hot airless spray
- pumping viscosity is achieved at 50°C - 70°C
- temperature in the mixing unit must be between 65°C and 75°C

Recommended thinner	no thinner should be added
Nozzle orifice	approx. 0.58 - 0.81 mm (= 0.023 - 0.032 in) depending on required production speed and dft
Nozzle pressure	15 MPa (= approx. 150 bar; 2130 p.s.i.)
Temperature at nozzle	60°C

CLEANING SOLVENT

Sigma thinner 91-88

Cleaning Procedures of the spray equipment:

- mixed material will become insoluble within a few minutes after mixing at 60°C
- parts of the spraying equipment containing mixed base and hardener must be cleaned immediately after completion of the job or during any interruption

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

- ventilation should be provided in confined spaces to maintain good visibility

ADDITIONAL DATA

Film thickness and spreading rate

theoretical spreading rate m²/l	0.7
dft in µm	1500

min. dft for closed film with airless spray: 250 µm

Overcoating

- for a good intercoat adhesion it is necessary that a coated surface which should be repaired or completely recoated is roughened up by means of sweep blasting or abrading
- for manual repaint of small damages special repair sets are available called: "SigmaLine 855 repair", product data sheet 7655 RP

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Curing table

substrate temperature	touch dry	dry to handle	full cure
0°C	3.5 hours	7 hours	12 days
5°C	2 hours	4 hours	10 days
10°C	1.5 hour	3 hours	8 days
15°C	1 hour	1.5 hour	6 days
20°C	30 min.	1 hour	4 days
30°C	15 min.	30 min.	2 days
40°C	6 min.	15 min.	24 hours
50°C	3 min.	6 min.	12 hours

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

Pot life (at application viscosity)

20°C	5 min.
50°C	2 min.
60°C	1 min.
70°C	0.5 min.

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

SigmaLine 855 repair	see product data sheet 7655 RP
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
Cleaning of steel and removal of rust	see information sheet 1490

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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 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.

DS	7655
184960 blue	100000 set 1000 ltr
235683 redbrown	200800 set 1000 ltr
235693 grey	500000 set 1000 ltr