

**SIGMALINE 859**

(SIGMALINING PURTAR SF 59)

4 pages

November 2005  
Revision of September 2004**DESCRIPTION**

two component solvent free polyurethane tar coating

**PRINCIPAL CHARACTERISTICS**

- solvent free coating for the protection of external of pipelines and underground storage tanks
- excellent corrosion resistance
- fast curing
- excellent adhesion
- good abrasion resistance
- good water resistance

**COLOURS AND GLOSS**

black - gloss

**BASIC DATA AT 20°C**(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)  
(data for mixed product)

Mass density

1.8 g/cm<sup>3</sup>

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 m<sup>2</sup>/l for 1500 µm \*

Touch dry after

1 hour \*

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<sub>z</sub>) 40 - 70 µm
- substrate temperature should be above 15°C and at least 3°C above dew point, lower temperatures will reduce flow properties

**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
- if any symptoms arise immediately seek medical advice

## ADDITIONAL DATA

### Film thickness and spreading rate

theoretical spreading rate m <sup>2</sup> /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 859 repair", product data sheet 7659 RP

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### ***Curing table***

substrate temperature	touch dry	dry to handle	full cure
15°C	1 hour	2 hours	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**

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
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 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.

DS	7659
155313 black	180 ltr base
155314	200 ltr hardener