

SIGMADUR 1800

4 pages

 May 2008
 Revision of February 2006

DESCRIPTION	two component high solids polymeric urethane
PRINCIPAL CHARACTERISTICS	<ul style="list-style-type: none"> – excellent resistance to atmospheric exposure conditions – outstanding colour and gloss retention – non-chalking, non-yellowing – cures at temperatures down to -5°C – tough and abrasion resistant – resistant to splash of mineral and vegetable oils, paraffins, aliphatic petroleum products and mild chemicals – can be recoated even after long atmospheric exposure
COLOURS AND GLOSS	white and various other colours (see also the SigmaCare Shade Card of PPG Protective & Marine Coatings) - gloss
BASIC DATA AT 20°C	(1 g/cm ³ = 8.25 lb/US gal; 1 m ² /l = 40.7 ft ² /US gal) (data for mixed product)
Mass density	1.3 g/cm ³
Volume solids	68 ± 2%
VOC (supplied)	max. 226 g/kg (Directive 1999/13/EC, SED) max. 289 g/l (approx. 2.4 lb/gal)
Recommended dry film thickness	75 µm depending on system
Theoretical spreading rate	9.1 m ² /l for 75 µm
Touch dry after	2 hours
Overcoating interval	min. 12 hours * max. unlimited
Full cure after	7 days *
	(data for components)
Shelf life (cool and dry place)	at least 12 months * see additional data
RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES	<ul style="list-style-type: none"> – previous coat; (epoxy or polyurethane) dry and free from any contamination and sufficiently roughened if necessary – substrate temperature should be at least 3°C above dew point – maximum relative humidity during application and curing is 85%
INSTRUCTIONS FOR USE	<p>mixing ratio by volume: base to hardener 84 : 16</p> <ul style="list-style-type: none"> – 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 – thinner should be added after mixing the components
Induction time	none
Pot life	5 hours at 20°C * * see additional data

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AIRLESS SPRAY

Recommended thinner	Sigma thinner 21-06
Volume of thinner	3 - 5%, depending on required thickness and application conditions
Nozzle orifice	approx. 0.38 - 0.42 mm (= 0.015 - 0.016 in)
Nozzle pressure	18 MPa (= approx. 180 bar; 2560 p.s.i.)

AIR SPRAY

Recommended thinner	Sigma thinner 21-06
Volume of thinner	5 - 10%, depending on required thickness and application conditions
Nozzle orifice	1 - 1.5 mm
Nozzle pressure	0.3 - 0.4 MPa (= approx. 3 - 4 bar; 43 - 57 p.s.i.)

BRUSH/ROLLER

Recommended thinner	Sigma thinner 21-06
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 borne 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

- contains a toxic polyisocyanate curing agent
- avoid at all times inhalation of aerosol spraymist

ADDITIONAL DATA**Film thickness and spreading rate**

theoretical spreading rate m ² /l	9.1	6.8	5.4
dft in µm	75	100	125

Overcoating table for SigmaDur 1800

substrate temperature	-5°C	0°C	10°C	20°C	30°C	40°C
minimum interval	3 days	2 days	1 day	12 hours	8 hours	5 hours
maximum interval	unlimited when cleaned from any contamination					

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Curing table

substrate temperature	touch dry	full cure
-5°C	8 hours	22 days
0°C	5 hours	18 days
10°C	3 hours	10 days
20°C	2 hours	7 days
30°C	1 hour	4 days
40°C	0.5 hour	3 days

- adequate ventilation must be maintained during application and curing (please refer to sheet 1433 and 1434)
- please note that should condensation occur during or soon after application this may result in a reduction of gloss

Pot life (at application viscosity)

10°C	7 hours
20°C	5 hours
30°C	4 hours
40°C	3 hours

Worldwide availability

Whilst it is always the aim of PPG Protective & Marine 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 Sigma Coatings products made by PPG Protective & Marine 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.

PPG Protective & Marine 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. PPG Protective & Marine 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.

	PDS	7529
236077	white	7000001400
236081	white	7000002200