

SIGMADUR 590

(AMERSHIELD)

4 pages

October 2009

DESCRIPTION

two component aliphatic acrylic polyurethane finish

PRINCIPAL CHARACTERISTICS

- excellent resistance to atmospheric exposure conditions
- excellent colour and gloss retention
- non-chalking, non-yellowing
- resistant to splash of mineral and vegetable oils, paraffins, aliphatic petroleum products and mild chemicals
- good application properties

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/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

73 ± 2%

VOC (supplied)

max. 207 g/kg (Directive 1999/13/EC, SED)
max. 280 g/l (approx. 2.4 lb/gal)

Recommended dry film thickness

100 - 125 µm depending on system

Theoretical spreading rate

7.3 m²/l for 100 µm *

Touch dry after

2.5 hours

Overcoating interval

min. 8 hours *
max. 1 month

Full cure after

4 days *

(data for components)

Shelf life (cool and dry place)

at least 24 months

* see additional data

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- previous coat; (epoxy or polyurethane) dry and free from any contamination and sufficiently roughened if necessary
- during application and curing a substrate temperature down to -5°C is acceptable provided the substrate is dry and free from ice
- substrate temperature should be at least 3°C above dew point
- maximum relative humidity during application and curing is 85%
- premature exposure to early condensation and rain may cause colour and gloss change

INSTRUCTIONS FOR USE

mixing ratio by volume: base to hardener 80 : 20

- the temperature of the mixed base and hardener should preferably be above 10°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

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Induction time none
 Pot life 2.5 hours at 20°C *
 * see additional data

AIRLESS SPRAY

Recommended thinner Thinner 60-15
 Volume of thinner 3 - 5%, depending on required thickness and application conditions
 Nozzle orifice approx. 0.44 - 0.49 mm (= 0.017 - 0.019 in)
 Nozzle pressure 20 MPa (= approx. 200 bar; 2800 p.s.i.)

AIR SPRAY

Recommended thinner Thinner 60-15
 Volume of thinner 3 - 5%, 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 Thinner 60-15
 Volume of thinner 0 - 5%

CLEANING SOLVENT

Thinner 90-58

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	7.3	5.8
dft in µm	100	125

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Overcoating table for SigmaDur products

substrate temperature	10°C	20°C	30°C
minimum interval	48 hours	8 hours	4 hours
maximum interval	1 month	1 month	12 hours

- surface should be dry and free from any contamination

Curing table

substrate temperature	dry to handle	full cure
10°C	72 hours	6 days
20°C	10 hours	4 days
30°C	5 hours	3 days

- adequate ventilation must be maintained during application and curing (please refer to sheets 1433 and 1434)
- premature exposure to early condensation and rain may cause colour and gloss change

Pot life (at application viscosity)

10°C	4 hours
20°C	2.5 hours
30°C	1 hour

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

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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.

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