

SIGMACAP FINISH PU

3 pages

May 2010
Revision of October 2008

DESCRIPTION	two component, glossy, acrylic aliphatic polyurethane finish
PRINCIPAL CHARACTERISTICS	<ul style="list-style-type: none"> - developed as finish coat for (anti-corrosive) coating systems on steel and concrete structures in atmospheric exposure conditions - good U.V. resistance - excellent colour and gloss retention - good impact and abrasion resistance - relatively long potlife at elevated temperatures - resistant to splash and spillage of mild chemicals and solvents - high elasticity
COLOURS AND GLOSS	white, black (other colours on request) - 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)
Mass density	1.2 g/cm ³
Volume solids	55± 2%
Recommended dry film thickness	50 - 75µm per coat depending on system
Theoretical spreading rate	11 m ² /l for 50 µm*
Touch dry after	1 hour
Overcoating interval	min. 12 hours* max. unlimited
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 above 5°C and at least 3°C above dew point
INSTRUCTIONS FOR USE	<p>mixing ratio by volume: base to hardener 88 : 12</p> <ul style="list-style-type: none"> - 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
Induction time	none
Pot life	5 hours at 20°C *
APPLICATION METHODS	High gloss thin film polyurethane finishes tend to atomise less easy. It is possible to use the widely used airless spray application method for this kind of finish but is not be the best option as small nozzles and high pressures can easily result in overspray. Better suitable methods are pressure pot and air assisted airless (e.g. air-mix) application which result in better dry film thickness control, better appearance and much less overspray.

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AIRLESS SPRAY

Recommended thinner Sigma thinner 21-06
 Volume of thinner 0 - 10%, depending on required thickness and application conditions
 Nozzle orifice approx. 0.32 - 0.37 mm (= 0.013 - 0.015 in)
 Nozzle pressure 20 MPa (= approx. 200 bar; 2800 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 21-22 (preferred) or Sigma thinner 21-06
 Volume of thinner 0 - 5%

CLEANING SOLVENT

Sigma thinner 90-53 (preferred) or 21-06

SAFETY PRECAUTIONS

for paint and recommended thinners see safety sheets 1430, 1431 and relevant material safety data sheets

this is a solvent based 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	11	9.1	7.3
dft in µm	50	60	75

minimum dft for closed film with air(less) spray: 35 µm
 maximum dft for brush application: 40 µm

Overcoating table for Sigma polyurethane finishes

substrate temperature	10°C	20°C	30°C	40°C
Minimum interval	24 hours	12 hours	10 hours	8 hours
maximum interval	no limitation providing the surface is free from any contamination			

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Curing table

Substrate temperature	Dry to touch	Dry to handle	Full cure
20 °C	1 hours	8 hours	8 days
30 °C	45 minutes	6 hours	5 days
40 °C	30 minutes	4 hours	3 days

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

Pot life (at application viscosity)

20 °C	5 hours
30 °C	3 hours
40 °C	2 hours

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.

This product is not part of the Sigma Coatings global range and availability is depending on location.

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

Limitation of Liability

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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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Sigma Paints Saudi Arabia Ltd