

SIGMACAP FINISH PU

DESCRIPTION

Two-component, aliphatic acrylic polyurethane finish

PRINCIPAL CHARACTERISTICS

- Finish coat for (anti-corrosive) coating systems on steel and concrete structures in atmospheric exposure conditions
- High UV resistance
- Excellent color and gloss retention
- Good abrasion and impact resistance
- Long potlife at elevated temperatures
- Resistant to water and splash of mild chemicals
- High elasticity

COLOR AND GLOSS LEVEL

- White, black (other colors available on request)
- Gloss

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.2 kg/l (10.0 lb/US gal)
Volume solids	55 ± 2%
VOC (Supplied)	Directive 1999/13/EC, SED: max. 334.0 g/kg max. 430.0 g/l (approx. 3.6 lb/US gal)
Recommended dry film thickness	50 - 75 µm (2.0 - 3.0 mils) depending on system
Theoretical spreading rate	11.0 m ² /l for 50 µm (441 ft ² /US gal for 2.0 mils)
Dry to touch	1 hour
Overcoating Interval	Minimum: 12 hours Maximum: Unlimited
Full cure after	8 days
Shelf life	Base: at least 36 months when stored cool and dry Hardener: at least 24 months when stored cool and dry

Notes:

- See ADDITIONAL DATA – Spreading rate and film thickness
- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time

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RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Substrate conditions

- Previous coat (epoxy or polyurethane) must be dry and free from any contamination
 - Previous coat: surface should be sufficiently roughened if necessary
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Substrate temperature and application conditions

- Substrate temperature during application and curing should be above 5°C (41°F)
 - Substrate temperature during application and curing should be at least 3°C (5°F) above dew point
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INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 88:12

- The temperature of the mixed base and hardener should be above 10°C (50°F), otherwise extra thinner may be required to obtain application viscosity
 - Thinner should be added after mixing the components
 - Adding too much thinner results in reduced sag resistance
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Induction time

None

Pot life

5 hours at 20°C (68°F)

Note: See ADDITIONAL DATA – Pot life

Application

- High-gloss, thin-film polyurethane finishes tend to atomize less easy
 - The widely used airless spray application method is for those kind of finishes possible, but would not be the best option as small nozzles and high-pressure can easily result in overspray
 - Better suitable methods are pressure pot and air assisted airless (e.g. airmix) application, which results in better dry film thickness control, better appearance and less overspray
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Air spray

Recommended thinner

THINNER 21-06

Volume of thinner

5 - 10%, depending on required thickness and application conditions

Nozzle orifice

1.0 - 1.5 mm (approx. 0.040 - 0.060 in)

Nozzle pressure

0.3 - 0.4 MPa (approx. 3 - 4 bar; 44 - 58 p.s.i.)

Airless spray

Recommended thinner

THINNER 21-06

Volume of thinner

0 - 10%, depending on required thickness and application conditions

Nozzle orifice

Approx. 0.33 - 0.38 mm (0.013 - 0.015 in)

Nozzle pressure

20.0 MPa (approx. 200 bar; 2901 p.s.i.)

Brush/roller

Recommended thinner

THINNER 21-22

Volume of thinner

0 - 5%

Note: It is also possible to use the less preferred Thinner 21-06

Cleaning solvent

THINNER 90-53

Note: It is also possible to use the less preferred Thinner 21-06



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ADDITIONAL DATA

Spreading rate and film thickness	
DFT	Theoretical spreading rate
50 µm (2.0 mils)	11.0 m ² /l (441 ft ² /US gal)
60 µm (2.4 mils)	9.2 m ² /l (368 ft ² /US gal)
75 µm (3.0 mils)	7.3 m ² /l (294 ft ² /US gal)

Notes:

- Minimum DFT for close film with airless spray: 35 µm (1.4 mils)
- Maximum DFT when brushing: 40 µm (1.6 mils)

Overcoating interval for DFT up to 75 µm (3.0 mils)					
Overcoating with...	Interval	10°C (50°F)	20°C (68°F)	30°C (86°F)	40°C (104°F)
polyurethane topcoat	Minimum	24 hours	12 hours	10 hours	8 hours
	Maximum	Unlimited	Unlimited	Unlimited	Unlimited

Note: Surface should be dry and free from any contamination before recoating

Curing time for DFT up to 75 µm (3.0 mils)			
Substrate temperature	Dry to touch	Dry to handle	Full cure
20°C (68°F)	1 hour	8 hours	8 days
30°C (86°F)	45 minutes	6 hours	5 days
40°C (104°F)	30 minutes	4 hours	3 days

Notes:

- Adequate ventilation must be maintained during application and curing (please refer to INFORMATION SHEETS 1433 and 1434)
- Premature exposure to early condensation and rain may cause color and gloss change

Pot life (at application viscosity)	
Mixed product temperature	Pot life
20°C (68°F)	5 hours
30°C (86°F)	3 hours
40°C (104°F)	2 hours

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WORLDWIDE AVAILABILITY

It is always the aim of PPG Protective and Marine Coatings to supply the same product on a worldwide basis. However, 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	INFORMATION SHEET	1411
• SAFETY INDICATIONS	INFORMATION SHEET	1430
• SAFETY IN CONFINED SPACES AND HEALTH SAFETY, EXPLOSION HAZARD – TOXIC HAZARD	INFORMATION SHEET	1431
• SAFE WORKING IN CONFINED SPACES	INFORMATION SHEET	1433
• DIRECTIVES FOR VENTILATION PRACTICE	INFORMATION SHEET	1434
• CLEANING OF STEEL AND REMOVAL OF RUST	INFORMATION SHEET	1490

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