SIGMADUR™ 520

DESCRIPTION

Two-component, high-build semi-gloss aliphatic acrylic polyurethane finish

PRINCIPAL CHARACTERISTICS

- Easy application by roller and airless spray
- Unlimited recoatable
- Excellent resistance to atmospheric exposure conditions
- Good color and gloss retention (aluminum version becomes grey)
- Non-chalking, non-yellowing
- Cures at temperatures down to -5°C (23°F)
- 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

COLOR AND GLOSS LEVEL

- Full color range and aluminum as RAL 9006 avaiable
- Semi-gloss

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BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	White: 1.4 kg/l (11.7 lb/US gal) Aluminum: 1.1 kg/l (9.2 lb/US gal)
Volume solids	White: 58 ± 2% Aluminum: 48 ± 2%
VOC (Supplied)	Directive 1999/13/EC, SED: max. 287 g/kg (white) Directive 1999/13/EC, SED: max. 377 g/kg (aluminum) max. 383.0 g/l (approx. 3.2 lb/gal) (white) max. 405.0 g/l (approx. 3.4 lb/gal) (aluminum)
Recommended dry film thickness	50 - 75 µm (2.0 - 3.0 mils) depending on system
Theoretical spreading rate	White: 11.6 m^2/l for 50 µm (465 ft^2/US gal for 2.0 mils) Aluminum: 9.6 m^2/l for 50 µm (385 ft^2/US gal for 2.0 mils)
Dry to touch	1 hour
Overcoating Interval	Minimum: 6 hours Maximum: Unlimited
Full cure after	4 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

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Substrate conditions

- Previous coat (epoxy or polyurethane) must be dry and free from any contamination
- Surface of previous coat should be sufficiently roughened if necessary

Substrate temperature and application conditions

- Substrate temperature during application and curing down to -5°C (23°F) is acceptable; provided the substrate is free from ice and dry
- Substrate temperature during application and curing should be at least 3°C (5°F) above dew point
- Relative humidity during application and curing should not exceed 85%
- Premature exposure to early condensation and rain my cause color and gloss change

INSTRUCTIONS FOR USE

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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
- Adding too much thinner results in reduced sag resistance
- Thinner should be added after mixing the components
- Aluminum version has lower gloss than the standard version and the color could be different by application method

Induction time

None

Pot life

5 hours at 20°C (68°F)

Note: See ADDITIONAL DATA – Pot life

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 - 5%, depending on required thickness and application conditions

Nozzle orifice

Approx. 0.46 mm (0.018 in)

Nozzle pressure

15.0 MPa (approx. 150 bar; 2176 p.s.i.)

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Brush/roller

Recommended thinner
THINNER 21-06

Volume of thinner
0 – 5%

Cleaning solvent
THINNER 90-53

ADDITIONAL DATA

Spreading rate and film thickness – White	
DFT	**Theoretical spreading rate**
50 µm (2.0 mils)	11.6 m^2/l (465 ft^2/US gal)
75 µm (3.0 mils)	7.7 m^2/l (310 ft^2/US gal)

Spreading rate and film thickness – Aluminum	
DFT	**Theoretical spreading rate**
50 µm (2.0 mils)	9.6 m^2/l (385 ft^2/US gal)
75 µm (3.0 mils)	6.4 m^2/l (257 ft^2/US gal)

Overcoating interval for DFT up to 75 µm (3.0 mils)							
Overcoating with...	**Interval**	**-5°C (23°F)**	**0°C (32°F)**	**10°C (50°F)**	**20°C (68°F)**	**30°C (86°F)**	**40°C (104°F)**
itself	Minimum	24 hours	16 hours	8 hours	6 hours	5 hours	3 hours
	Maximum	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited

Note: Surface should be dry and free from any contamination

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Curing time for DFT up to 75 µm (3.0 mils)		
Substrate temperature	**Dry to handle**	**Full cure**
-5°C (23°F)	24 hours	15 days
0°C (32°F)	16 hours	11 days
10°C (50°F)	8 hours	6 days
20°C (68°F)	6 hours	4 days
30°C (86°F)	5 hours	3 days
40°C (104°F)	3 hours	48 hours

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**
10°C (50°F)	7 hours
20°C (68°F)	5 hours
30°C (86°F)	3 hours
40°C (104°F)	2 hours

SAFETY PRECAUTIONS

- For paint and recommended thinners see INFORMATION 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 vapor, 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 spray mist

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.

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REFERENCES

• CONVERSION TABLES	INFORMATION SHEET	1410
• 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
• RELATIVE HUMIDITY – SUBSTRATE TEMPERATURE – AIR TEMPERATURE	INFORMATION SHEET	1650

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