

PPG SIGMADUR™ 550

DESCRIPTION

Two-component, aliphatic acrylic polyurethane finish

PRINCIPAL CHARACTERISTICS

- Unlimited recoatable
- Excellent resistance to atmospheric exposure conditions
- Good color and gloss retention
- Cures at temperatures down to -5°C (23°F)
- Resistant to splash of mineral and vegetable oils, paraffins, aliphatic petroleum products and mild chemicals
- Can be recoated even after long atmospheric exposure
- Good application properties
- ACQPA 35491-certified
- CE-marked product in accordance with EN 1504-2 (system 2+)

COLOR AND GLOSS LEVEL

- White and various other colors (see also SIGMACARE shade card)
- Gloss

Note:

- Certain colors, especially red, orange, and yellow may require additional coats for adequate hiding, especially if applied over primers with a significant color contrast

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.3 kg/l (10.8 lb/US gal)
Volume solids	55 ± 2%
VOC (Supplied)	Directive 2010/75/EU, SED: max. 334.0 g/kg EUR Directive: 2004/42/IIA(i)(500) 459 g/l 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 m²/l for 50 µm (441 ft²/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

PPG SIGMADUR™ 550

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 at -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 (37°F) above dew point
 - Relative humidity during application and curing should not exceed 85%
 - Should condensation on the surface occur during, or soon after application, this could result in color and gloss change
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INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 88:12 (7.33:1)

- 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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Pot life

5 hours at 20°C (68°F)

Note:

- See ADDITIONAL DATA – Pot life
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Air spray

Recommended thinner

THINNER 21-06

Volume of thinner

3 - 5%, 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.)

PPG SIGMADUR™ 550

Airless spray**Recommended thinner**

THINNER 21-06

Volume of thinner

3 - 5%, depending on required thickness and application conditions

Nozzle orifice

Approx. 0.43 – 0.48 mm (0.017 – 0.019 in)

Nozzle pressure

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

Brush/roller**Recommended thinner**

THINNER 21-06

Volume of thinner

0 – 5%

Cleaning solvent

- THINNER 90-53

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)

PPG SIGMADUR™ 550

Overcoating interval for DFT up to 50 µm (2.0 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

Curing time for DFT up to 60 µm (2.4 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
- 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

- See Safety Data Sheet and product label for complete safety and precaution requirements
- 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 polyisocyanate curing agent

PPG SIGMADUR™ 550

WORLDWIDE AVAILABILITY

It is always the aim of PPG Protective & 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

- Guide | PPG SIGMACARE PLUS | Online guide to maintenance at sea
- Information sheet | Explanation of product data sheets

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