



New Guard Coatings Group

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This information is not exhaustive and it is the user's responsibility to ensure that this data sheet is the most current by contacting their local New Guard Coatings Group branch prior to using the coating/product.

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SIGMADUR™ 580

DESCRIPTION

Two-component, high solids semi-gloss recoatable acrylic polyurethane finish

PRINCIPAL CHARACTERISTICS

- Excellent resistance against corrosion and seawater
- Excellent color and gloss retention
- 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
- Lead- and chromate free

COLOR AND GLOSS LEVEL

- White (other colors available on request)
- Semi-gloss

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.4 kg/l (11.7 lb/US gal)
Volume solids	75 ± 2%
VOC (Supplied)	Directive 1999/13/EC, SED: max. 191.0 g/kg UK PG 6/23(92) Appendix 3: max. 269.0 g/l (approx. 2.2 lb/US gal)
Recommended dry film thickness	75 µm (3.0 mils)
Theoretical spreading rate	10.0 m ² /l for 75 µm (401 ft ² /US gal for 3.0 mils)
Dry to touch	2 hours
Overcoating Interval	Minimum: 12 hours Maximum: Unlimited
Full cure after	7 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
 - Surface of previous coat should be sufficiently roughened if necessary
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Substrate temperature and application conditions

- 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%
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INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 82:18

- The temperature of the mixed base and hardener should preferably be above 15°C (59°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
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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

10 - 15%, 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.)

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Airless spray

Recommended thinner

THINNER 21-06

Volume of thinner

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

Nozzle orifice

Approx. 0.38 - 0.43 mm (0.015 - 0.017 in)

Nozzle pressure

18.0 MPa (approx. 180 bar; 2611 p.s.i.)

Brush/roller

Recommended thinner

THINNER 21-06

Volume of thinner

5 - 10%

Cleaning solvent

THINNER 90-53

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	Theoretical spreading rate
75 µm (3.0 mils)	10.0 m ² /l (401 ft ² /US gal)
100 µm (4.0 mils)	7.5 m ² /l (301 ft ² /US gal)
125 µm (5.0 mils)	6.0 m ² /l (241 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	60 hours	44 hours	24 hours	12 hours	8 hours	5 hours
	Maximum	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited

Note: Maximum interval is only unlimited when the surface is free from any contamination



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Curing time for DFT up to 75 µm (3.0 mils)		
Substrate temperature	Dry to touch	Full cure
-5°C (23°F)	8 hours	22 days
0°C (32°F)	5 hours	18 days
10°C (50°F)	3 hours	10 days
20°C (68°F)	2 hours	7 days
30°C (86°F)	1 hour	4 days
40°C (104°F)	30 minutes	3 days

Notes:

- Adequate ventilation must be maintained during application and curing (please refer to INFORMATION SHEETS 1433 and 1434)
- Should condensation on the surface occur during, or soon after application, this could result in gloss reduction

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
• CLEANING OF STEEL AND REMOVAL OF RUST	INFORMATION SHEET	1490
• RELATIVE HUMIDITY – SUBSTRATE TEMPERATURE – AIR TEMPERATURE	INFORMATION SHEET	1650

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