

# New Guard Coatings Group

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# 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)
- 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, including aluminum light and dark
- Semi-gloss
- Flat available on request for limited colors

## BASIC DATA AT 20°C (68°F)

Data for mixed product	
<b>Number of components</b>	Two
<b>Mass density</b>	White: 1.4 kg/l (11.7 lb/US gal) Aluminum: 1.1 kg/l (9.2 lb/US gal)
<b>Volume solids</b>	White: 58 ± 2% Aluminum: 51 ± 2%
<b>VOC (Supplied)</b>	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)
<b>Recommended dry film thickness</b>	50 - 75 µm (2.0 - 3.0 mils) depending on system
<b>Theoretical spreading rate</b>	White: 11.6 m <sup>2</sup> /l for 50 µm (465 ft <sup>2</sup> /US gal for 2.0 mils) Aluminum: 9.6 m <sup>2</sup> /l for 50 µm (385 ft <sup>2</sup> /US gal for 2.0 mils)
<b>Dry to touch</b>	1 hour
<b>Overcoating Interval</b>	Minimum: 6 hours Maximum: Unlimited
<b>Full cure after</b>	4 days



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## Data for mixed product

**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 may cause color and gloss change

## 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
- 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



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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.)

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## 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%

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## Cleaning solvent

THINNER 90-53

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## **ADDITIONAL DATA**

<b>Spreading rate and film thickness - White</b>	
<b>DFT</b>	<b>Theoretical spreading rate</b>
50 µm (2.0 mils)	11.6 m <sup>2</sup> /l (465 ft <sup>2</sup> /US gal)
75 µm (3.0 mils)	7.7 m <sup>2</sup> /l (310 ft <sup>2</sup> /US gal)

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## Spreading rate and film thickness – Aluminum

DFT	Theoretical spreading rate
50 µm (2.0 mils)	9.6 m <sup>2</sup> /l (385 ft <sup>2</sup> /US gal)
75 µm (3.0 mils)	6.4 m <sup>2</sup> /l (257 ft <sup>2</sup> /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

## 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
- 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 polyisocyanate curing agent
- Avoid at all times inhalation of aerosol spray mist

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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

• 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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