

PPG SIGMADUR™ 1800

DESCRIPTION

Two-component, high solids polymeric urethane

PRINCIPAL CHARACTERISTICS

- Excellent resistance to atmospheric exposure conditions
- Outstanding color and gloss retention
- Cures 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

- Standard and custom colors
- High 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	68 ± 2%
VOC (Supplied)	Directive 2010/75/EU, SED: max. 226.0 g/kg UK PG 6/23(92) Appendix 3: max. 289.0 g/l (approx. 2.4 lb/US gal)
Recommended dry film thickness	50 - 75 µm (2.0 - 3.0 mils) per coat
Theoretical spreading rate	13.6 m ² /l for 50 µm (545 ft ² /US gal for 2.0 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 5:1

- 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
 - 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

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

3 - 5%, 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

0 - 5%

Cleaning solvent

- THINNER 90-53

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	Theoretical spreading rate
50 µm (2.0 mils)	13.6 m ² /l (545 ft ² /US gal)
60 µm (2.4 mils)	11.3 m ² /l (454 ft ² /US gal)
75 µm (3.0 mils)	9.1 m ² /l (364 ft ² /US gal)

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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	3 hours	48 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

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
- 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)	4 hours
40°C (104°F)	3 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

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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

- Information sheet | Explanation of product data sheets

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