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

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	75 µm (3.0 mils)
Theoretical spreading rate	9.1 m^2/l for 75 µm (364 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

Substrate temperature

- 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%

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

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.)

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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**
75 µm (3.0 mils)	9.1 m^2/l (364 ft^2/US gal)
100 µm (4.0 mils)	6.8 m^2/l (273 ft^2/US gal)
125 µm (5.0 mils)	5.4 m^2/l (218 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 Maximum	3 hours Unlimited	48 hours Unlimited	24 hours Unlimited	12 hours Unlimited	8 hours Unlimited	5 hours 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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