

# 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

## BASIC DATA AT 20°C (68°F)

| Data for mixed product                |   |
|---------------------------------------|---|
| <b>Number of components</b>           | Two   |
| <b>Mass density</b>                   | 1.3 kg/l (10.8 lb/US gal)   |
| <b>Volume solids</b>                  | 68 ± 2%   |
| <b>VOC (Supplied)</b>                 | Directive 2010/75/EU, SED: max. 226.0 g/kg<br>UK PG 6/23(92) Appendix 3: max. 289.0 g/l (approx. 2.4 lb/US gal) |
| <b>Recommended dry film thickness</b> | 75 µm (3.0 mils)  |
| <b>Theoretical spreading rate</b>     | 9.1 m <sup>2</sup> /l for 75 µm (364 ft <sup>2</sup> /US gal for 3.0 mils)                                      |
| <b>Dry to touch</b>                   | 2 hours   |
| <b>Overcoating Interval</b>           | Minimum: 12 hours<br>Maximum: Unlimited   |
| <b>Full cure after</b>                | 7 days  |
| <b>Shelf life</b>                     | Base: at least 36 months when stored cool and dry<br>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

# PPG SIGMADUR™ 1800

## 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 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.)

---

# PPG SIGMADUR™ 1800

## 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 <sup>2</sup> /l (364 ft <sup>2</sup> /US gal) |
| 100 µm (4.0 mils)                 | 6.8 m <sup>2</sup> /l (273 ft <sup>2</sup> /US gal) |
| 125 µm (5.0 mils)                 | 5.4 m <sup>2</sup> /l (218 ft <sup>2</sup> /US gal) |

---

# PPG SIGMADUR™ 1800

| 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



# PPG SIGMADUR™ 1800

## 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

---

## WARRANTY

PPG warrants (i) its title to the product, (ii) that the quality of the product conforms to PPG's specifications for such product in effect at the time of manufacture and (iii) that the product shall be delivered free of the rightful claim of any third person for infringement of any U.S. patent covering the product. THESE ARE THE ONLY WARRANTIES THAT PPG MAKES AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES, UNDER STATUTE OR ARISING OTHERWISE IN LAW, FROM A COURSE OF DEALING OR USAGE OF TRADE, INCLUDING WITHOUT LIMITATION, ANY OTHER WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR USE, ARE DISCLAIMED BY PPG. Any claim under this warranty must be made by Buyer to PPG in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life of the product, or one year from the date of the delivery of the product to the Buyer, whichever is earlier. Buyer's failure to notify PPG of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

---

## LIMITATIONS OF LIABILITY

IN NO EVENT WILL PPG BE LIABLE UNDER ANY THEORY OF RECOVERY (WHETHER BASED ON NEGLIGENCE OF ANY KIND, STRICT LIABILITY OR TORT) FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IN ANY WAY RELATED TO, ARISING FROM, OR RESULTING FROM ANY USE MADE OF THE PRODUCT. The information in this sheet is intended for guidance only and is based upon laboratory tests that PPG believes to be reliable. PPG may modify the information contained herein at any time as a result of practical experience and continuous product development. All recommendations or suggestions relating to the use of the PPG product, whether in technical documentation, or in response to a specific inquiry, or otherwise, are based on data, which to the best of PPG's knowledge, is reliable. The product and related information is designed for users having the requisite knowledge and industrial skills in the industry and it is the end-user's responsibility to determine the suitability of the product for its own particular use and it shall be deemed that Buyer has done so, as its sole discretion and risk. PPG has no control over either the quality or condition of the substrate, or the many factors affecting the use and application of the product. Therefore, PPG does not accept any liability arising from any loss, injury or damage resulting from such use or the contents of this information (unless there are written agreements stating otherwise). Variations in the application environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results. This sheet supersedes all previous versions and it is the Buyer's responsibility to ensure that this information is current prior to using the product. Current sheets for all PPG Protective & Marine Coatings Products are maintained at [www.ppgpmc.com](http://www.ppgpmc.com). The English text of this sheet shall prevail over any translation thereof.

---

The PPG logo, and all other PPG marks are property of the PPG group of companies. All other third-party marks are property of their respective owners.

