

# PPG SIGMADUR™ 450 E

(Formerly known as PPG AMERCOAT® 450 E)

## DESCRIPTION

Two-component, aliphatic acrylic polyurethane finish

## PRINCIPAL CHARACTERISTICS

- High gloss high UV exposure resistant topcoat
- Outstanding weather resistance with excellent color and gloss retention
- Resistant to a broad range of corrosive and marine atmospheres
- Resists soil pick up - easily cleanable
- Hard, tough, flexible, and abrasion resistant
- Cures through a wide temperature range
- Recoatable with itself
- BBA and HAPAS network rail approved

## COLOR AND GLOSS LEVEL

- RAL and BS colors
- High-gloss

## BASIC DATA AT 20°C (68°F)

Data for mixed product	
<b>Number of components</b>	Two
<b>Mass density</b>	1.4 kg/l (11.4 lb/US gal), depending on color
<b>Volume solids</b>	60 ± 2%
<b>VOC (Supplied)</b>	Directive 2010/75/EU, SED: max. 303.0 g/kg UK PG 6/23(92) Appendix 3: max. 350.0 g/l (approx. 2.9 lb/US gal)
<b>Recommended dry film thickness</b>	40 - 75 µm (1.6 - 3.0 mils) per coat
<b>Theoretical spreading rate</b>	15.0 m <sup>2</sup> /l for 40 µm (602 ft <sup>2</sup> /US gal for 1.6 mils) 8.0 m <sup>2</sup> /l for 75 µm (321 ft <sup>2</sup> /US gal for 3.0 mils)
<b>Dry to touch</b>	3 hours
<b>Overcoating Interval</b>	Minimum: 8 hours Maximum: Unlimited
<b>Shelf life</b>	Base: at least 24 months when stored cool and dry Hardener: at least 24 months when stored cool and dry

Notes:

- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time



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## RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- Coating performance is proportional to the degree of surface preparation. Refer to the application instructions for specific primers and intermediate coats for application and curing procedure. All previous coats must dry and free of contaminants. Adhere to all minimum and maximum topcoat times for specific primers and intermediate coats.

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### **Primed steel or previous coat**

- Compatible previous coat must be dry and free from any contamination

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### **Substrate temperature and application conditions**

- Surface temperature during application should be between 0°C (32°F) and 60°C (140°F)
- Surface temperature during application should be at least 3°C (5°F) above dew point
- Ambient temperature during application and curing should be between 0°C (32°F) and 50°C (122°F)
- Relative humidity during application should not exceed 85%

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## INSTRUCTIONS FOR USE

### **Mixing ratio by volume: base to hardener 4:1**

- Add hardener to base and continue stirring until homogeneous
- 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
- The thinner should be added after mixing the two components
- Adding too much thinner results in reduced sag resistance

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### **Pot life**

4 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**

0 - 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. 0.38 - 0.48 mm (0.015 - 0.019 in)

### **Nozzle pressure**

15.2 MPa (approx. 152 bar; 2200 p.s.i.)

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## **Brush/roller**

- Only for touch-up and spot repair

### **Recommended thinner**

THINNER 21-06

### **Volume of thinner**

0 - 10%

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## **Cleaning solvent**

- THINNER 90-53
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**ADDITIONAL DATA**

Overcoating interval for DFT up to 75 µm (3.0 mils)					
Overcoating with...	Interval	5°C (41°F)	10°C (50°F)	20°C (68°F)	30°C (86°F)
itself	Minimum	24 hours	16 hours	8 hours	4 hours
	Maximum	Unlimited	Unlimited	Unlimited	Unlimited

Note:

- This product has an unlimited overcoating interval provided the surface is free from chalking and other contaminations

Curing time for DFT up to 75 µm (3.0 mils)		
Substrate temperature	Dry to touch	Dry to handle
5°C (41°F)	6 hours	16 hours
10°C (50°F)	4.5 hours	12 hours
20°C (68°F)	3 hours	8 hours
30°C (86°F)	1.5 hours	4 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
5°C (41°F)	12 hours
10°C (50°F)	8 hours
20°C (68°F)	4 hours
30°C (86°F)	2 hours

Note:

- Since the pot life is limited and shortened by high temperatures, do not mix more material that will be used within the pot life period



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## 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.

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## REFERENCES

- Information sheet | Explanation of product data sheets

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## 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.

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## LIMITATIONS OF LIABILITY

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