

# PPG SIGMASHIELD® 899 GF

## DESCRIPTION

Two-component, high solids glass flake epoxy coating

## PRINCIPAL CHARACTERISTICS

- Protect steel structures in severe environment like splash or tidal zones
- Unique, high-solids, high build coating
- Resistant to well designed cathodic protection
- Excellent resistance to high humidity and moisture
- Can be applied by heavy-duty, single-feed, airless spray equipment
- Excellent abrasion and impact resistance
- Suitable for twin feed application
- Approved for NORSOK M501:2022 System 7A and 7B
- Meets ISO 24656:2022 Cathodic protection of Offshore wind and structures

## COLOR AND GLOSS LEVEL

- Gray, off-white, yellow

## 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>	90 ± 2%
<b>VOC (Supplied)</b>	Directive 2010/75/EU, SED: max. 121 g/kg UK PG 6/23(92) Appendix 3: max. 116 g/l
<b>Recommended dry film thickness</b>	300 - 1000 µm (12.0 - 40.0 mils) per coat
<b>Theoretical spreading rate</b>	1.8 m <sup>2</sup> /l for 500 µm (72 ft <sup>2</sup> /US gal for 20.0 mils)
<b>Dry to handle</b>	20 hours
<b>Overcoating Interval</b>	Minimum: 24 hours Maximum: 20 days
<b>Full cure after</b>	7 days
<b>Shelf life</b>	Base: at least 12 months when stored cool and dry Hardener: at least 12 months when stored cool and dry

Note:

- Contact your PPG representative for recommended coverage rates



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## RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- Steel; blast cleaned to a minimum of ISO-Sa2½, blasting profile 50 – 130 µm (2.0 – 5.2 mils)
  - Surface must be dry and free from any contamination
  - Substrate temperature during application and curing should be at least 3°C (37°F) above dew point
  - Maximum relative humidity up to 85%
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## INSTRUCTIONS FOR USE

### **Mixing ratio by volume: base to hardener 3:1**

- Upon mixing, Base and Hardener shall have a minimum temperature of 15°C (59°F); operation above 20°C (68°F) is preferred.
  - At lower temperature, the viscosity will be too high for spray application
  - Do not mix-off when base and hardener temperatures are greater than 35°C (95°F)
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### **Application**

- Apply by airless spray or brush
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### **Pot life**

45 minutes at 20°C (68°F)

Note:

- See ADDITIONAL DATA – Pot life
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## **Airless spray**

- Use heavy-duty, single-feed, airless spray equipment, preferably 60:1 pump ratio and suitable high-pressure hoses
- Spray lines should be kept as short as possible for better application
- Remove tip filter and use a large mesh sieve at the pump intake

## **Recommended thinner**

THINNER 21-06 or THINNER 91-92

## **Volume of thinner**

0 - 8%, depending on required thickness and application conditions

## **Nozzle orifice**

Approx. 0.43 – 0.53 mm (0.017 – 0.021 in)

## **Nozzle pressure**

19.3 MPa (approx. 193 bar; 2800 p.s.i.)

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## **Brush/roller**

- Brush: for stripe coating and spot repair only

## **Volume of thinner**

0 – 5%

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## **Cleaning solvent**

- THINNER 90-53 or THINNER 90-58 (AMERCOAT 12)

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## **ADDITIONAL DATA**

<b>Spreading rate and film thickness</b>	
<b>DFT</b>	<b>Theoretical spreading rate</b>
300 µm (12.0 mils)	3.0 m <sup>2</sup> /l (120 ft <sup>2</sup> /US gal)
500 µm (20.0 mils)	1.8 m <sup>2</sup> /l (72 ft <sup>2</sup> /US gal)
750 µm (30.0 mils)	1.2 m <sup>2</sup> /l (48 ft <sup>2</sup> /US gal)
1000 µm (40.0 mils)	0.9 m <sup>2</sup> /l (36 ft <sup>2</sup> /US gal)

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Overcoating interval for DFT up to 500 µm (20.0 mils)					
Overcoating with...	Interval	10°C (50°F)	20°C (68°F)	30°C (86°F)	40°C (104°F)
itself	Minimum	48 hours	24 hours	24 hours	24 hours
	Maximum	16 days	7 days	5 days	3 days

Notes:

- Strong UV/Sunlight will substantially reduce the overcoating time
- Surface must be dry and free from any contamination
- For specific overcoating and topcoat recommendations, please contact your PPG representative.

Curing time for DFT up to 500 µm (20.0 mils)			
Substrate temperature	Dry to touch	Dry to handle	Full cure
10°C (50°F)	16 hours	48 hours	8 days
20°C (68°F)	12 hours	20 hours	7 days
30°C (86°F)	8 hours	16 hours	5 days

Note:

- Adequate ventilation must be maintained during application and curing

Pot life (at application viscosity)	
Mixed product temperature	Pot life
10°C (50°F)	1 hour
20°C (68°F)	45 minutes
30°C (86°F)	35 minutes

**Product Qualifications**

- Qualified for NORSOK M501:2022 System 7A, 7B
- Meets ISO 24656:2022 Cathodic protection of offshore wind structures

**SAFETY PRECAUTIONS**

- 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
- See Safety Data Sheet and product label for complete safety and precaution requirements



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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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