

# SIGMASHIELD™ 905 GF

## DESCRIPTION

Two-component, high solids glass flake reinforced polyamine cured epoxy coating

## PRINCIPAL CHARACTERISTICS

- Suitable for onshore or offshore environments
- Excellent abrasion and impact resistance
- Good resistance to various chemicals
- Excellent anticorrosive properties and water resistance
- Can be applied by heavy-duty, single-feed, airless spray equipment (60:1)
- Ideal for immersed, non-immersed and partially immersed such as splash zones, decks etc.
- Meets the requirements of Aramco APCS-19C

## COLOR AND GLOSS LEVEL

- Gray, offwhite, clear (semi-transparent)
- Yellow
- Gloss

## BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.4 kg/l (11.7 lb/US gal)
Volume solids	98 ± 2%
VOC (Supplied)	max. 58.0 g/l (approx. 0.5 lb/US gal)
Recommended dry film thickness	500 - 1000 µm (20.0 - 40.0 mils) per coat
Theoretical spreading rate	3.3 m <sup>2</sup> /l for 300 µm (134 ft <sup>2</sup> /US gal for 12.0 mils) 1.0 m <sup>2</sup> /l for 1000 µm (40.7 ft <sup>2</sup> /US gal for 40.0 mils)
Dry to touch	9 hours
Overcoating Interval	Minimum: 14 hours Maximum: 6 months
Shelf life	Base: at least 24 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

- Steel; blast cleaned to ISO-Sa2½, blasting profile 50 – 100 µm (2.0 – 4.0 mils)
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### Substrate temperature and application conditions

- Substrate temperature during application and curing should be above 5°C (41°F)
  - Substrate temperature during application and curing should be at least 3°C (37°F) above dew point
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## INSTRUCTIONS FOR USE

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

- The temperature of the mixed base and hardener should preferably be above 20°C (68°F)
  - Higher temperature will result in shorter pot life
  - No thinner should be added
  - In-line heaters can be considered
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### **Pot life**

1 hour 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/ inline heating or insulated hoses may be necessary to avoid cooling down of paint in hoses at low air temperature
- Application with 45:1 airless spray equipment is possible, provided in-line, heated high-pressure hoses are used

### **Recommended thinner**

No thinner should be added

### **Nozzle orifice**

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

### **Nozzle pressure**

21.0 MPa (approx. 210 bar; 3046 p.s.i.)

Note:

- In case of using 45:1 airless spray equipment, the paint must be heated to approximately 30°C (86°F) in order to obtain the right application viscosity
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## Brush/roller

- Brush: for stripe coating and spot repair only

## Recommended thinner

No thinner should be added

## Cleaning solvent

- THINNER 90-53 or THINNER 90-83
- Paint inside the spraying equipment must be removed before the pot life has been expired

## ADDITIONAL DATA

Spreading rate and film thickness	
DFT	Theoretical spreading rate
300 µm (12.0 mils)	3.3 m <sup>2</sup> /l (131 ft <sup>2</sup> /US gal)
600 µm (24.0 mils)	1.6 m <sup>2</sup> /l (65 ft <sup>2</sup> /US gal)
1000 µm (40.0 mils)	1.0 m <sup>2</sup> /l (40.7 ft <sup>2</sup> /US gal)

Overcoating interval for DFT up to 1000 µm (40.0 mils)						
Overcoating with...	Interval	5°C (41°F)	10°C (50°F)	20°C (68°F)	30°C (86°F)	40°C (104°F)
itself	Minimum	36 hours	20 hours	14 hours	6 hours	4 hours
	Maximum exposed to direct sunshine	2 months	2 months	2 months	1 month	1 month
	Maximum NOT exposed to direct sunshine	6 months	6 months	6 months	4 months	2 months

Note:

- Surface should be dry and free from any contamination



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Curing time for DFT up to 1000 µm (40.0 mils)			
Substrate temperature	Dry to touch	Dry to handle	Full cure
5°C (41°F)	30 hours	36 hours	21 days
10°C (50°F)	20 hours	24 hours	10 days
20°C (68°F)	9 hours	14 hours	5 days
30°C (86°F)	4 hours	6 hours	3 days
40°C (104°F)	3 hours	4 hours	3 days

Pot life (at application viscosity)	
Mixed product temperature	Pot life
20°C (68°F)	1 hour
30°C (86°F)	45 minutes
40°C (104°F)	20 minutes

## SAFETY PRECAUTIONS

- Read all label and Safety Data Sheet (SDS) information prior to use
- Although this is a solvent-free paint, care should be taken to avoid inhalation of spray mist, as well as contact between the wet paint and exposed skin or eyes

## 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

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