

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)
- 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%
VOC (Supplied)	UK PG 6/23(92) Appendix 3: max. 20.0 g/l (approx. 0.2 lb/US gal)
Recommended dry film thickness	500 - 750 µm (20.0 - 30.0 mils) per coat
Theoretical spreading rate	3.3 m ² /l for 300 µm (134 ft ² /US gal for 12.0 mils) 1.6 m ² /l for 600 µm (65 ft ² /US gal for 24.0 mils)
Dry to touch	8 hours
Overcoating Interval	Minimum: 12 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 (5°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

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/ 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 ² /l (131 ft ² /US gal)
600 µm (24.0 mils)	1.6 m ² /l (65 ft ² /US gal)

Overcoating interval for DFT up to 750 µm (30.0 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	12 hours	5 hours	2 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 750 µm (30.0 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)	8 hours	12 hours	5 days
30°C (86°F)	3 hours	4 hours	3 days

Pot life (at application viscosity)	
Mixed product temperature	Pot life
20°C (68°F)	45 minutes
30°C (86°F)	20 minutes
40°C (104°F)	10 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.

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