SIGMASHIELD™ 880 GF / AMERLOCK™ 880 GF

DESCRIPTION

Two-component, surface tolerant, high-solids, glass flake epoxy coating

PRINCIPAL CHARACTERISTICS

- Primarily designed for use in offshore splash zone maintenance
- Designed for use in heavy-duty and corrosive environments
- Outstanding sea water resistance
- Excellent corrosion resistance
- Enhanced impact and abrasion resistance
- Continues to cure when immersed in water
- Long-term protection in a single-coat application
- Resistant to well designed cathodic protection
- Suitable for application on exterior of buried pipes
- Suitable on wet blast or ultra high pressure water (UHPWW) cleaned substrates (damp or dry)
- Product can deal with temperatures up to 204°C in dry and non insulated conditions with intermittent peaks to 215°C

COLOR AND GLOSS LEVEL

- Yellow, black (other colors available on request)
- Gloss

Note:

- Epoxy coatings will characteristically chalk and fade upon exposure to sunlight. Light colors are prone to ambering to some extent in interior or exterior exposures.

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.5 kg/l (12.1 lb/US gal)
Volume solids	85 ± 2%
VOC (Supplied)	Directive 2010/75/EU, SED: max. 122.0 g/kg UK PG 6/23(92) Appendix 3: max. 207.0 g/l (approx. 1.7 lb/US gal) EPA Method 24: 200.0 g/l (1.7 lb/US gal)
Temperature resistance (Continuous)	To 204°C (400°F)
Temperature resistance (Intermittent)	To 215°C (419°F)
Recommended dry film thickness	150 - 1000 µm (6.0 - 40.0 mils) depending on system
Theoretical spreading rate	4.3 m^2/l for 200 µm (170 ft^2/US gal for 8.0 mils)
Dry to touch	3 hours
Overcoating Interval	Minimum: 3.5 hours

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Data for mixed product	
	Maximum: 14 days
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

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Substrate conditions

- Coating performance will depend upon the surface preparation degree
- For atmospheric service, abrasive blast to ISO Sa2½ or minimum SSPC SP6, power tool cleaned to ISO St3 (SSPC SP3) or hand tool cleaned to ISO St2 (SSPC SP2) or ultra high pressure water jet to SSPC SP WJ-2(L) / NACE WJ-2(L)
- For immersion service: steel; blast cleaned to ISO Sa2½ (SSPC SP10), blasting profile 40 – 75 µm (1.6 – 3.0 mils)
- Higher profiles (>75 µm, 3.0 mils) is allowable with appropriate coating thickness
- Compatible previous coat must be dry and free from any contamination

Note:

- Coating performance is, in general, proportional to the degree of surface preparation

Substrate temperature and application conditions

- Substrate temperature during application should be at least 3°C (5°F) above dew point

Non-ferrous metals and stainless steel

- Remove all rust, dirt, moisture, grease or other contaminants from the surface
- Lightly abrasive blast with a fine abrasive in accordance with SSPC SP16 guidelines to achieve a profile of 40 - 100 µm (1.5 - 4.0 mils)

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 3:1

- Thinner should be added after mixing the components
- Do not thin more than is required by appropriate application property
- Adding too much thinner results in reduced sag resistance and slower cure

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Induction time

0 minute

Note:

- No induction time required

Pot life

2 hours at 20°C (68°F)

Note:

- See ADDITIONAL DATA – Pot life

Air spray

Recommended thinner

THINNER 91-92

Volume of thinner

4 - 8%, depending on required thickness and application conditions

Nozzle orifice

1.5 – 3.0 mm (approx. 0.060 – 0.110 in)

Nozzle pressure

0.2 - 0.4 MPa (approx. 2 - 4 bar; 29 - 58 p.s.i.)

Airless spray

Recommended thinner

THINNER 91-92

Volume of thinner

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

Nozzle orifice

Approx. 0.53 – 0.69 mm (0.021 – 0.027 in)

Nozzle pressure

15.0 MPa (approx. 150 bar; 2176 p.s.i.)

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Brush/roller

Recommended thinner

THINNER 91-92

Volume of thinner

0 – 5%

Cleaning solvent

- THINNER 90-53

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	**Theoretical spreading rate**
200 µm (8.0 mils)	4.3 m^2/l (170 ft^2/US gal)
500 µm (20.0 mils)	1.7 m^2/l (68 ft^2/US gal)

Overcoating interval for DFT up to 500 µm (20.0 mils)							
Overcoating with...	**Interval**	**-5°C (23°F)**	**5°C (41°F)**	**10°C (50°F)**	**20°C (68°F)**	**30°C (86°F)**	**40°C (104°F)**
itself	Minimum	36 hours	14 hours	7 hours	3.5 hours	2 hours	1.5 hours
	Maximum	2 months	1.5 months	1 month	28 days	21 days	14 days
epoxy coatings	Minimum	36 hours	14 hours	7 hours	3.5 hours	2 hours	1.5 hours
	Maximum	1 month	28 days	21 days	14 days	7 days	4 days
polyurethanes	Minimum	48 hours	22 hours	14 hours	10 hours	6 hours	4 hours
	Maximum	1 month	28 days	21 days	14 days	7 days	4 days

Note:

- Surface should be dry and free from any contamination

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Curing time for DFT up to 500 µm (20.0 mils)			
Substrate temperature	**Dry to touch**	**Dry to handle**	**Full cure**
-5°C (23°F)	24 hours	48 hours	30 days
5°C (41°F)	10 hours	24 hours	18 days
10°C (50°F)	5 hours	16 hours	14 days
20°C (68°F)	3 hours	8 hours	7 days
30°C (86°F)	2 hours	5 hours	5 days
40°C (104°F)	1 hour	3 hours	3 days

Notes:

- The curing time is related to the DFT of the paint and ventilation of the drying condition. High DFT and poor ventilation will slow curing.
- When total DFT is higher than 1500 µm (60.0 mils), curing times have to be 2 - 2.5 times in order to obtain sufficient mechanical strength
- Premature exposure to water will lead to whitening of dark colours when applied between tides on jetties, piling etc. This will not affect anticorrosive properties of the coating.
- Adequate ventilation must be maintained during application and curing

Pot life (at application viscosity)	
Mixed product temperature	**Pot life**
10°C (50°F)	3 hours
20°C (68°F)	2 hours
30°C (86°F)	1 hour

Product Qualifications

- Qualified for NORSOK M501 Rev.6 System 7A with 2 coating system

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

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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