

SIGMASHIELD™ 880 / AMERLOCK® 880

DESCRIPTION

Two-component, high-build, polyamine adduct-cured epoxy coating

PRINCIPAL CHARACTERISTICS

- Primarily designed for use in offshore splash zone maintenance
- Outstanding sea water resistance
- Excellent corrosion resistance
- Good abrasion resistance
- Continues to cure when immersed in water
- Long-term protection in a single-coat application
- Resistant to well designed cathodic protection
- Suitable on wet blast or ultra high pressure water (UHPWW) cleaned substrates (damp or dry)

COLOR AND GLOSS LEVEL

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

Note: Epoxy coatings will characteristically chalk and fade upon exposure to sunlight. Note that product tinted to customer colors cannot be used as primer or intermediate layer in a multicoat system, only use factory grind batches. Tinted colors can be used only as last layer in a multicoat system

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 1999/13/EC, 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/ltr (1.7 lb/USgal)
Recommended dry film thickness	200 - 1000 µm (8.0 - 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 Maximum: 14 days

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Data for mixed product

Shelf life	Base: at least 24 months when stored cool and dry Hardener: at least 24 months when stored cool and dry
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Notes:

- See ADDITIONAL DATA – Spreading rate and film thickness
- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- Existing pipelines may have to be cleaned first by scraper pigs and solvents

Substrate conditions

- Coating performance will depend upon the surface preparation degree
- Steel; blast cleaned to ISO-Sa2 or ISO-Sa2½
- Blasting profile of 40 – 80 µm (1.6 – 3.1 mils) is recommended
- Steel; hand/power tool clean in accordance with St3 or SSPC-SP3 for new building and St2 or SSPC-SP2 for maintenance, UHPWH in accordance with WJ2L/3I (SSPC-VIS-4)
- Compatible previous coat must be dry and free from any contamination

Substrate temperature and application conditions

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

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 75:25 (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

Induction time

None

Pot life

2 hours at 20°C (68°F)

Note: See ADDITIONAL DATA – Pot life

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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.)

Brush/roller

Recommended thinner

THINNER 91-92

Volume of thinner

0 – 5%

Cleaning solvent

THINNER 90-53

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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

Curing time for DFT up to 500 µm (20 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:

- For repair of jetties, piling etc. between tides, SIGMASHIELD 880 can be immersed within 30 minutes. Whitening can be happened for dark color, but will not affect anti-corrosive performances.
- 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
- Adequate ventilation must be maintained during application and curing (please refer to INFORMATION SHEETS 1433 and 1434)

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

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SAFETY PRECAUTIONS

- For paint and recommended thinners see INFORMATION SHEETS 1430, 1431 and relevant Material Safety Data Sheets
- 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 and 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

• EXPLANATION TO PRODUCT DATA SHEETS	INFORMATION SHEET	1411
• SAFETY INDICATIONS	INFORMATION SHEET	1430
• SAFETY IN CONFINED SPACES AND HEALTH SAFETY, EXPLOSION HAZARD – TOXIC HAZARD	INFORMATION SHEET	1431
• SAFE WORKING IN CONFINED SPACES	INFORMATION SHEET	1433
• DIRECTIVES FOR VENTILATION PRACTICE	INFORMATION SHEET	1434

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