

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 for application on exterior of buried pipes
- Suitable on wet blast or ultra high pressure water (UHPWW) cleaned substrates (damp or dry)

COLOR AND GLOSS LEVEL

- Offwhite, yellow and 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

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

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)

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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

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

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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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