

# SIGMASHIELD™ 880 XS

## DESCRIPTION

Two-component, extremely high solids polyamine adduct cured pure epoxy coating

## PRINCIPAL CHARACTERISTICS

- Suitable for hot applied hot cured and hot applied cold cured applications
- Properties improved by hot application, better than conventional cold-applied, cold-cured version (ex. PPG SIGMASHIELD 880)
- Suitable for repairing steel structures under water or in tidal zone
- Excellent resistance against corrosion and seawater
- Excellent adhesion on blasted steel up to 20 MPa
- Excellent abrasion and impact resistance
- Long-term protection in a single-coat application
- Resistant to well designed cathodic protection
- Complies with AS/NZS 3750.2:2008 requirements

## COLOR AND GLOSS LEVEL

- Grey (RAL 7035), Yellow (RAL 1023) and offwhite
- Semi-gloss

## BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.7 kg/l (13.8 lb/US gal)
Volume solids	98 ± 2%
VOC (Supplied)	Directive 1999/13/EC, SED: max. 27.0 g/kg EPA Method 24: 0.4 lb/US gal (45.0 g/l)
Recommended dry film thickness	300 - 800 µm (12.0 - 32.0 mils) depending on system
Theoretical spreading rate	3.3 m <sup>2</sup> /l for 300 µm (131 ft <sup>2</sup> /US gal for 12.0 mils) 1.2 m <sup>2</sup> /l for 800 µm (49 ft <sup>2</sup> /US gal for 32.0 mils)
Dry to touch	2.5 hours
Overcoating Interval	Minimum: 3.5 hours
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
- Weight solid percent is 99.8 ± 0.2%, tested by German standard VdL-RL 04 method, which is meeting solvent free requirement.



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## RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

### Substrate conditions

- Coating performance will depend upon the surface preparation degree
- Steel; blast cleaned to ISO-Sa2 or ISO-Sa2½
- Blasting profile of 75 – 100 µm (3.0 – 4.0 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)

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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 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 75:25 (3:1)

- Application with twin-feed hot airless spray equipment
- No thinner should be added

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### Induction time

None

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### Pot life

4 minutes at 60°C (140°F)

Note: See ADDITIONAL DATA – Pot life

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### Airless spray

- Twin-feed, hot airless spray
- No thinner is recommended

### Nozzle orifice

Approx. 0.58 – 0.79 mm (0.023 in – 0.031 in)

### Nozzle pressure

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

### Notes:

- Temperature at nozzle should be 60°C (140°F)
- Pumping viscosity is achieved between 40°C (104°F) and 60°C (140°F)
- Temperature in the mixing unit must be between 55°C (131°F) and 65°C (149°F)
- Mixed material will become insoluble within a few minutes after mixing at 60°C (140°F) parts of the spraying equipment containing mixed base and hardener must be cleaned immediately after completion of the job or during any interruption

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## Brush/roller

- Brush: for stripe coating and spot repair only
- Roller application is not recommended

## Recommended thinner

No thinner should be added

## Cleaning solvent

THINNER 90-53

## 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)
500 µm (20.0 mils)	2.0 m <sup>2</sup> /l (79 ft <sup>2</sup> /US gal)
800 µm (32.0 mils)	1.2 m <sup>2</sup> /l (49 ft <sup>2</sup> /US gal)

Overcoating interval for DFT up to 800 µm (32.0 mils)					
Overcoating with...	Interval	10°C (50°F)	20°C (68°F)	30°C (86°F)	40°C (104°F)
itself	Minimum	10 hours	5 hours	2.5 hours	2 hours
	Maximum	Extended	Extended	Extended	Extended

### Notes:

- Surface should be dry and free from any contamination
- Sand papering is recommended to achieve maximum adhesion prior to overcoat, regardless of recoating interval

Curing time for DFT up to 800 µm (32.0 mils)			
Substrate temperature	Dry to touch	Dry to handle	Full cure
10°C (50°F)	4 hours	15 hours	12 days
20°C (68°F)	2.5 hours	7 hours	6 days
30°C (86°F)	1.5 hours	4 hours	4 days
40°C (104°F)	50 minutes	2 hours	48 hours
60°C (140°F)	15 minutes	30 minutes	18 hours

### Notes:

- Curing of dry to handle at 100°C to 110°C (212°F to 230°F) needs approx. 10 minutes
- Adequate ventilation must be maintained during application and curing (please refer to INFORMATION SHEETS 1433 and 1434)



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Pot life (at application viscosity)	
Mixed product temperature	Pot life
10°C (50°F)	1.5 hours
20°C (68°F)	1 hour
30°C (86°F)	30 minutes
40°C (104°F)	15 minutes
60°C (140°F)	4 minutes

## 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

## WARRANTY

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