



# New Guard Coatings Group

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This information is not exhaustive and it is the user's responsibility to ensure that this data sheet is the most current by contacting their local New Guard Coatings Group branch prior to using the coating/product.

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# SIGMACOVER™ 850 (SIGMASHIELD™ 880 HS)

## DESCRIPTION

Two-component, glass flake ultra high-build polyamine adduct cured epoxy coating

## PRINCIPAL CHARACTERISTICS

- For use in both offshore and onshore business
- Designed for use in heavy-duty and corrosive environments
- Glass-flake reinforced for improved impact and abrasion resistance
- Excellent seawater, cracking and corrosion resistance
- Long-term protection in a single-coat application
- Resistant to well designed cathodic protection
- Strong adhesion properties, suitable for wet blast cleaned substrates (damp or dry)

## COLOR AND GLOSS LEVEL

- Light gray (other colors available on request)
- Gloss

## BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.6 kg/l (12.9 lb/US gal)
Volume solids	90 ± 3%
VOC (Supplied)	Directive 2010/75/EU, SED: max. 140.0 g/kg UK PG 6/23(92) Appendix 3: max. 220.0 g/l (approx. 1.8 lb/US gal) China GB 30981-2020 (tested) 166.0 g/l (approx. 1.4 lb/gal)
Recommended dry film thickness	200 - 1000 µm (8.0 - 40.0 mils)
Theoretical spreading rate	3.0 m <sup>2</sup> /l for 300 µm (120 ft <sup>2</sup> /US gal for 12.0 mils)
Dry to touch	4 hours
Overcoating Interval	See overcoating tables
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

- 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
- Hydrojetted to VIS WJ2/3 L
- Compatible previous coat must be dry and free from any contamination

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### Substrate temperature

- Substrate temperature during application and curing should be above 0°C (32°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 80:20 (4:1)

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

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### Induction time

None

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### Pot life

1.5 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.)

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## Airless spray

### Recommended thinner

THINNER 91-92

### Volume of thinner

0 - 5%, 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

- Only for touch-up and repair

### Recommended thinner

THINNER 91-92

### Volume of thinner

0 - 5%

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## Cleaning solvent

THINNER 90-53

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## ADDITIONAL DATA

Spreading rate and film thickness	
DFT	Theoretical spreading rate
300 µm (12.0 mils)	3.0 m <sup>2</sup> /l (120 ft <sup>2</sup> /US gal)
500 µm (20.0 mils)	1.8 m <sup>2</sup> /l (72 ft <sup>2</sup> /US gal)
1000 µm (40.0 mils)	0.9 m <sup>2</sup> /l (36 ft <sup>2</sup> /US gal)

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Overcoating interval for DFT up to 500 µm (20.0 mils)						
Overcoating with...	Interval	0°C (32°F)	10°C (50°F)	20°C (68°F)	30°C (86°F)	40°C (104°F)
itself	Minimum	20 hours	8 hours	4 hours	2 hours	1.5 hours
	Maximum	1 month	1 month	28 days	21 days	14 days
epoxy coatings	Minimum	20 hours	8 hours	4 hours	2 hours	1.5 hours
	Maximum	1 month	14 days	10 days	7 days	4 days
polyurethanes	Minimum	36 hours	20 hours	14 hours	10 hours	6 hours
	Maximum	1 month	14 days	10 days	7 days	4 days

Note: Surface should be dry and free from any contamination before recoating

Curing time for DFT up to 500 µm (20 mils)			
Substrate temperature	Dry to touch	Dry to handle	Full cure
0°C (32°F)	18 hours	36 hours	24 days
5°C (41°F)	12 hours	30 hours	18 days
10°C (50°F)	6 hours	18 hours	14 days
20°C (68°F)	4 hours	10 hours	7 days
30°C (86°F)	3 hours	6 hours	5 days
40°C (104°F)	2 hours	3 hours	3 days

#### Notes:

- 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 (please refer to INFORMATION SHEETS 1433 and 1434)

Pot life (at application viscosity)	
Mixed product temperature	Pot life
0°C (32°F)	4 hours
10°C (50°F)	2 hours
20°C (68°F)	1.5 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

## WARRANTY

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