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)
Recommended dry film thickness	200 - 1000 µm (8.0 - 40.0 mils)
Theoretical spreading rate	3.0 m^2/l for 300 µm (120 ft^2/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

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

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 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

Pot life

1.5 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.)

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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.)

Brush/roller

- Only for touch-up and repair

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**
300 µm (12.0 mils)	3.0 m^2/l (120 ft^2/US gal)
500 µm (20.0 mils)	1.8 m^2/l (72 ft^2/US gal)
1000 µm (40.0 mils)	0.9 m^2/l (36 ft^2/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	**Full cure**	**Dry to touch**	**Dry to handle**
0°C (32°F)	24 days	18 hours	36 hours
5°C (41°F)	18 days	12 hours	30 hours
10°C (50°F)	14 days	6 hours	18 hours
20°C (68°F)	7 days	4 hours	10 hours
30°C (86°F)	5 days	3 hours	6 hours
40°C (104°F)	3 days	2 hours	3 hours

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

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

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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.

REFERENCES

- Information sheet | Explanation of product data sheets

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