

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	250 - 1000 µm (10.0 - 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

SIGMACOVER™ 850 (SIGMASHIELD™ 880 HS)

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 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

Induction time

None

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.)



SIGMACOVER™ 850 (SIGMASHIELD™ 880 HS)

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)

SIGMACOVER™ 850 (SIGMASHIELD™ 880 HS)

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

SIGMACOVER™ 850 (SIGMASHIELD™ 880 HS)

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

PPG warrants (i) its title to the product, (ii) that the quality of the product conforms to PPG's specifications for such product in effect at the time of manufacture and (iii) that the product shall be delivered free of the rightful claim of any third person for infringement of any U.S. patent covering the product. THESE ARE THE ONLY WARRANTIES THAT PPG MAKES AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES, UNDER STATUTE OR ARISING OTHERWISE IN LAW, FROM A COURSE OF DEALING OR USAGE OF TRADE, INCLUDING WITHOUT LIMITATION, ANY OTHER WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR USE, ARE DISCLAIMED BY PPG. Any claim under this warranty must be made by Buyer to PPG in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life of the product, or one year from the date of the delivery of the product to the Buyer, whichever is earlier. Buyer's failure to notify PPG of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

LIMITATIONS OF LIABILITY

IN NO EVENT WILL PPG BE LIABLE UNDER ANY THEORY OF RECOVERY (WHETHER BASED ON NEGLIGENCE OF ANY KIND, STRICT LIABILITY OR TORT) FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IN ANY WAY RELATED TO, ARISING FROM, OR RESULTING FROM ANY USE MADE OF THE PRODUCT. The information in this sheet is intended for guidance only and is based upon laboratory tests that PPG believes to be reliable. PPG may modify the information contained herein at any time as a result of practical experience and continuous product development. All recommendations or suggestions relating to the use of the PPG product, whether in technical documentation, or in response to a specific inquiry, or otherwise, are based on data, which to the best of PPG's knowledge, is reliable. The product and related information is designed for users having the requisite knowledge and industrial skills in the industry and it is the end-user's responsibility to determine the suitability of the product for its own particular use and it shall be deemed that Buyer has done so, as its sole discretion and risk. PPG has no control over either the quality or condition of the substrate, or the many factors affecting the use and application of the product. Therefore, PPG does not accept any liability arising from any loss, injury or damage resulting from such use or the contents of this information (unless there are written agreements stating otherwise). Variations in the application environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results. This sheet supersedes all previous versions and it is the Buyer's responsibility to ensure that this information is current prior to using the product. Current sheets for all PPG Protective & Marine Coatings Products are maintained at www.ppgmc.com. The English text of this sheet shall prevail over any translation thereof.

The PPG logo, and all other PPG marks are property of the PPG group of companies. All other third-party marks are property of their respective owners.

