

# SIGMASHIELD 825

(AMERLOCK 400 GFA)



4 pages

October 2009  
Revision of December 2008

<b>DESCRIPTION</b>	two component high solids glassflake reinforced polyamine cured epoxy coating
<b>PRINCIPAL CHARACTERISTICS</b>	<ul style="list-style-type: none"> <li>- excellent abrasion and impact resistance</li> <li>- high glassflake level</li> <li>- excellent resistance to corrosion</li> <li>- long term protection at areas subject to heavy wear and tear</li> <li>- very low water permeability, due to glassflake barrier</li> <li>- tar free</li> <li>- resistant to splash and spillage of a wide range of chemicals</li> <li>- application and curing at temperatures down to 10°C</li> <li>- suitable for immersion service</li> <li>- compatible with cathodic protection systems</li> <li>- up to 750 µm in a single coat</li> </ul>
<b>COLOURS AND GLOSS</b>	black (other (light) colours on request) - gloss
<b>BASIC DATA AT 20°C</b>	(1 g/cm <sup>3</sup> = 8.25 lb/US gal; 1 m <sup>2</sup> /l = 40.7 ft <sup>2</sup> /US gal) (data for mixed product)
Mass density	1.5 g/cm <sup>3</sup>
Volume solids	91 ± 2%
VOC (supplied)	max. 103 g/kg (Directive 1999/13/EC, SED) max. 154 g/l (approx. 1.3 lb/gal)
Recommended dry film thickness	200 - 750 µm depending on system
Theoretical spreading rate	4.6 m <sup>2</sup> /l for 200 µm *
Touch dry after	6 hours *
Overcoating interval	min. 24 hours * max. 3 months *
Full cure after	8 days
	(data for components)
Shelf life (cool and dry place)	at least 12 months * see additional data
<b>RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES</b>	<ul style="list-style-type: none"> <li>- steel; blast cleaned to ISO-Sa2½, blasting profile 50 - 100 µm</li> <li>- primed steel; (e.g. SigmaCover 280) dry and free from any contamination</li> <li>- substrate temperature should be at least 5°C and at least 3°C above dew point during application and curing</li> </ul>

**SIGMASHIELD 825**  
(AMERLOCK 400 GFA)

October 2009

**INSTRUCTIONS FOR USE**

mixing ratio by volume: base to hardener 50 : 50

- the temperature of the mixed base and hardener should preferably be above 15°C, otherwise extra solvent may be required to obtain application viscosity
- too much solvent results in reduced sag resistance and slower cure
- very good mechanical mixing of base and hardener is essential
- thinner should be added after mixing the components
- filters should be removed from spray equipment

Pot life

2 hours at 20°C \*  
\* see additional data

**AIRLESS SPRAY**

Recommended thinner  
Volume of thinner  
Nozzle orifice  
Nozzle pressure

Thinner 21-06  
0 - 5% for dft of about 400 µm  
approx. 0.53 - 0.79 mm (= 0.021 - 0.031 in)  
19 - 22.5 MPa (= approx. 190 - 225 bar; 2700 - 3200 p.s.i.)

**AIR SPRAY**

Recommended thinner  
Volume of thinner  
Nozzle orifice  
Nozzle pressure

Thinner 21-06  
6 - 10%, depending on required thickness and application conditions  
1.5 - 2 mm  
0.3 - 0.4 MPa (= approx. 3 - 4 bar; 43 - 57 p.s.i.)

**BRUSH/ROLLER**

- only for touch up and spot repair
- due to thixotropy it is difficult to obtain a smooth film by brush although this does not affect performance

**CLEANING SOLVENT**

Thinner 90-58

**SAFETY PRECAUTIONS**

for paint and recommended thinners see safety 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 vapour as well as contact between the wet paint and exposed skin or eyes

**ADDITIONAL DATA**

**Film thickness and spreading rate**

theoretical spreading rate m <sup>2</sup> /l	4.6	1.2
dft in µm	200	750

**SIGMASHIELD 825**  
(AMERLOCK 400 GFA)

October 2009

**Overcoating table for SigmaShield 825 for dft up to 300 µm**

	substrate temperature	10°C	15°C	20°C	30°C
with itself	minimum interval	48 hours	32 hours	24 hours	12 hours
with polyurethane durable finishes	minimum interval	72 hours	48 hours	36 hours	18 hours
	maximum interval	3 months	3 months	3 months	2 months

- surface should be dry and free from any contamination
- adequate ventilation must be maintained during application and curing (please refer to sheets 1433 and 1434)

**Curing table for dft up to 300 µm**

substrate temperature	touch dry	dry through	full cure
10°C	24 hours	48 hours	16 days
20°C	6 hours	24 hours	8 days
30°C	4 hours	6 hours	5 days

- adequate ventilation must be maintained during application and curing (please refer to sheets 1433 and 1434)

**Pot life (at application viscosity)**

10°C	3 hours
20°C	2 hours
30°C	1 hour

**Worldwide availability**

Whilst it is always the aim of PPG Protective & Marine Coatings to supply the same product on a worldwide basis, 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	see information sheet 1411
Safety indications	see information sheet 1430
Safety in confined spaces and health safety	
Explosion hazard - toxic hazard	see information sheet 1431
Safe working in confined spaces	see information sheet 1433
Directives for ventilation practice	see information sheet 1434
Cleaning of steel and removal of rust	see information sheet 1490

# SIGMASHIELD 825

(AMERLOCK 400 GFA)

October 2009

## LIMITATION OF LIABILITY

The information in this data sheet is based upon laboratory tests we believe to be accurate and is intended for guidance only. All recommendations or suggestions relating to the use of the Sigma Coatings products made by PPG Protective & Marine Coatings, whether in technical documentation, or in response to a specific enquiry, or otherwise, are based on data which to the best of our knowledge are reliable. The products and information are designed for users having the requisite knowledge and industrial skills and it is the end-user's responsibility to determine the suitability of the product for its intended use.

PPG Protective & Marine Coatings has no control over either the quality or condition of the substrate, or the many factors affecting the use and application of the product. PPG Protective & Marine Coatings does therefore not accept any liability arising from loss, injury or damage resulting from such use or the contents of this data sheet (unless there are written agreements stating otherwise).

The data contained herein are liable to modification as a result of practical experience and continuous product development.

This data sheet replaces and annuls all previous issues and it is therefore the user's responsibility to ensure that this sheet is current prior to using the product.

The English text of this document shall prevail over any translation thereof.

	PDS	7745
242373	black	8000002200