

SIGMASHIELD™ PRIME

DESCRIPTION

Premium dry cargo hold product based on bi-phasic polymer composition delivering excellent Mechanical, Thermal and Corrosion protection

PRINCIPAL CHARACTERISTICS

- 2-pack polymeric epoxy / amine providing kick-start cure and faster return to service
- Excellent anti-corrosive properties with excellent creep resistance
- Excellent abrasion and impact resistance
- Excellent gouging resistance, even at elevated temperatures

COLOR AND GLOSS LEVEL

- Redbrown, gray
- Eggshell

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.5 kg/l (12.5 lb/US gal)
Volume solids	64 ± 2%
VOC (Supplied)	Directive 2010/75/EU, SED: max. 267.0 g/kg max. 399.0 g/l (approx. 3.3 lb/US gal)
Recommended dry film thickness	See spreading rate tables
Theoretical spreading rate	6.4 m ² /l for 100 µm (257 ft ² /US gal for 4.0 mils)
Dry to touch	2 hours
Overcoating Interval	See overcoating tables
Full cure after	7 days
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

- Surface must be free from grease, salts and any contamination
- Steel; blast cleaned to ISO-Sa2½, blasting profile 30 - 75 µm (1.2 - 3.0 mils) or according to ISO-St3
- Shop primed steel; pretreated to SPSS-Pt3
- Coated steel; hydrojetted to VIS WJ2L (blasting profile 30 - 75 µm (1.2 - 3.0 mils))

Substrate temperature and application conditions

- Relative humidity during application and curing should not exceed 85%
- Substrate temperature during application and curing should be at least 3°C (5°F) above dew point
- Ambient temperature during application should be at least 5°C (41°F)

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 80:20 (4:1)

- The temperature of the mixed base and hardener should preferably be above 15°C (59°F), otherwise extra thinner may be required to obtain application viscosity
- Adding too much thinner results in reduced sag resistance and slower cure
- Thinner should be added after mixing the components

Induction time

None

Pot life

2.5 hours at 20°C (68°F)

Note: See ADDITIONAL DATA – Pot life

Air spray

Recommended thinner

THINNER 91-92

Volume of thinner

0 - 5%, depending on required thickness and application conditions

Nozzle orifice

1.5 - 2.0 mm (approx. 0.060 - 0.079 in)

Nozzle pressure

0.3 - 0.4 MPa (approx. 3 - 4 bar; 44 - 58 p.s.i.)



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Airless spray

Recommended thinner

THINNER 91-92

Volume of thinner

0 - 3%, depending on required thickness and application conditions

Nozzle orifice

Approx. 0.53 – 0.74 mm (0.021 – 0.029 in)

Nozzle pressure

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

Brush/roller

Recommended thinner

No extra thinner is necessary

Volume of thinner

Up to 5% THINNER 91-92 can be added if desired

Cleaning solvent

THINNER 90-53

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	Theoretical spreading rate
100 µm (4.0 mils)	6.4 m ² /l (257 ft ² /US gal)

Overcoating interval for DFT up to 150 µm (6.0 mils)						
itself						
Overcoating with...	Interval	5°C (41°F)	10°C (50°F)	20°C (68°F)	30°C (86°F)	40°C (104°F)
itself, SIGMASHIELD MTC, SIGMASHIELD 420	Minimum	13 hours	6 hours	2.5 hours	1.5 hours	1 hour
	Maximum	3 months	3 months	3 months	3 months	3 months

Note: Surface should be dry and free from any contamination

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Curing time for DFT up to 150 µm (6.0 mils)

Substrate temperature	Dry to touch	Dry to handle	Full cure
10°C (50°F)	3 hours	8 hours	14 days
20°C (68°F)	2 hours	5 hours	7 days
30°C (86°F)	1 hour	3 hours	5 days
40°C (104°F)	30 minutes	2 hours	4 days

Note: 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
15°C (59°F)	5 hours
20°C (68°F)	2.5 hours
30°C (86°F)	2 hours

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

• CONVERSION TABLES	INFORMATION SHEET	1410
• 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
• DIRECTIVES FOR VENTILATION PRACTICE	INFORMATION SHEET	1434
• CLEANING OF STEEL AND REMOVAL OF RUST	INFORMATION SHEET	1490
• SPECIFICATION FOR MINERAL ABRASIVES	INFORMATION SHEET	1491
• RELATIVE HUMIDITY – SUBSTRATE TEMPERATURE – AIR TEMPERATURE	INFORMATION SHEET	1650

SIGMASHIELD™ PRIME

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