

# 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	
<b>Number of components</b>	Two
<b>Mass density</b>	1.5 kg/l (12.5 lb/US gal)
<b>Volume solids</b>	64 ± 2%
<b>VOC (Supplied)</b>	Directive 2010/75/EU, SED: max. 267.0 g/kg max. 399.0 g/l (approx. 3.3 lb/US gal) China GB 38469-2019 (tested) 398.0 g/l (approx. 3.3 lb/gal)
<b>Recommended dry film thickness</b>	See spreading rate tables
<b>Theoretical spreading rate</b>	6.4 m <sup>2</sup> /l for 100 µm (257 ft <sup>2</sup> /US gal for 4.0 mils)
<b>Dry to touch</b>	2 hours
<b>Overcoating Interval</b>	See overcoating tables
<b>Full cure after</b>	7 days
<b>Shelf life</b>	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 <sup>2</sup> /l (257 ft <sup>2</sup> /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

## 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

- 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 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

## WARRANTY

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