

SIGMAPRIME® 1000

DESCRIPTION

Two-component, multi-purpose epoxy anticorrosive primer, based upon pure epoxy technology

PRINCIPAL CHARACTERISTICS

- Universal epoxy system suitable for all vessel areas
- Excellent anticorrosive properties and water resistance
- Good abrasion and chemical resistance
- Excellent adhesion to steel, shop primer, galvanized steel and non-ferrous metals
- Excellent recoatability
- Suitable for application and curing in a wide range of climatic conditions

COLOR AND GLOSS LEVEL

- Gray, green
- Gloss

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.4 kg/l (11.5 lb/US gal)
Volume solids	98 ± 2%
VOC (Supplied)	EPA Method 24: 105.5 g/ltr (0.9 lb/USgal)
Recommended dry film thickness	160 - 400 µm (6.3 - 16.0 mils) depending on system
Theoretical spreading rate	6.1 m²/l for 160 µm (250 ft²/US gal for 6.3 mils) 2.5 m²/l for 400 µm (98 ft²/US gal for 16.0 mils)
Dry to touch	8 hours
Overcoating Interval	Minimum: 12 hours Maximum: 6 months when NOT exposed to direct sunshine Maximum: 2 months when exposed to direct sunshine
Full cure after	5 days
Shelf life	Base: at least 12 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

Immersion exposure

- Steel or steel with not approved zinc silicate shop primer; blast cleaned to ISO-Sa2½, blasting profile 30 – 75 µm (1.2 – 3.0 mils) or according to ISO-St3
- Steel with approved zinc silicate shop primer; weld seams and areas of shop primer damage or break down should be blast cleaned to Iso-Sa 2½, blasting profile 30 – 75 µm (1.2 – 3.0 mils) or power tool cleaned to SPSS-Pt3
- Previous coat must be dry and free from any contamination

IMO-MSC.215(82) requirements for water ballast tanks

- Steel; ISO 8501-3 2006 grade P2, with all edges treated to a rounded radius of minimum 2 mm (0.079 in) or subject to three pass grinding
- Steel or steel with not approved zinc silicate shop primer; blast cleaned to ISO-Sa2½
- Steel with approved zinc silicate shop primer; weld seams and areas of shop primer damage or break down should be blast cleaned to Iso-Sa 2½ blasting profile 30 – 75 µm (1.2 – 3.0 mils): [1] For shop primer with IMO type approval; no additional requirements; [2] For shop primer without IMO type approval; blast cleaned to ISO-Sa2 removing at least 70% of intact shop primer, blasting profile 30 – 75 µm (1.2 – 3.0 mils)
- Dust quantity on the surface to be coated must not exceed rating "1" for dust size class "3", "4" or "5" (ISO 8502-3-2017). Lower dust size classes ("1" and/or "2") to be removed if visible without magnification.
- Previous coat must be dry and free from any contamination

Atmospheric exposure conditions

- 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
- Galvanized steel must be free from grease, salts and any contamination
- Galvanized steel must be sweep blasted or otherwise roughened
- Previous coat must be dry and free from any contamination

Substrate temperature and application conditions

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

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 20°C (68°F)
- Higher temperature will result in shorter pot life
- No thinner should be added
- In-line heaters can be considered

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Pot life

50 minutes at 20°C (68°F)

Note: See ADDITIONAL DATA – Pot life

Airless spray

Recommended thinner

No thinner should be added

Nozzle orifice

Approx. 0.43 – 0.53 mm (0.017 – 0.021 in)

Nozzle pressure

21.0 MPa (approx. 210 bar; 3046 p.s.i.)

Brush/roller

Recommended thinner

No thinner should be added

Cleaning solvent

THINNER 90-53 or THINNER 90-83

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	Theoretical spreading rate
160 µm (6.3 mils)	6.1 m ² /l (250 ft ² /US gal)
200 µm (8.0 mils)	4.9 m ² /l (196 ft ² /US gal)
300 µm (12.0 mils)	3.3 m ² /l (131 ft ² /US gal)
400 µm (16.0 mils)	2.5 m ² /l (98 ft ² /US gal)

Overcoating interval for DFT up to 400 µm (16.0 mils)						
Overcoating with...	Interval	5°C (41°F)	10°C (50°F)	20°C (68°F)	30°C (86°F)	40°C (104°F)
itself	Minimum	36 hours	20 hours	12 hours	5 hours	2 hours
	Maximum exposed to direct sunshine	2 months	2 months	2 months	1 month	1 month
	Maximum NOT exposed to direct sunshine	6 months	6 months	6 months	4 months	2 months

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Curing time for DFT up to 400 µm (16.0 mils)

Substrate temperature	Dry to touch	Dry to handle	Full cure
5°C (41°F)	30 hours	36 hours	21 days
10°C (50°F)	20 hours	24 hours	10 days
20°C (68°F)	8 hours	12 hours	5 days
30°C (86°F)	3 hours	4 hours	3 days

Pot life (at application viscosity)

Mixed product temperature	Pot life
20°C (68°F)	50 minutes
30°C (86°F)	20 minutes

SAFETY PRECAUTIONS

- For paint and recommended thinners see INFORMATION SHEETS 1430, 1431 and relevant Material Safety Data Sheets
- Although this is a solvent-free paint, care should be taken to avoid inhalation of spray mist, 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
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
CLEANING OF STEEL AND REMOVAL OF RUST	INFORMATION SHEET	1490
PPG PROTECTIVE & MARINE COATINGS' BALLAST TANK WORKING PROCEDURES NEW-BUILDING		

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.



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Depending on specific country of application the following versions are available:

Article code	Color	Reference
244303	gray	5000002200 (244299 base, 244302 hardener)
244304	green	4000002200 (244300 base, 244302 hardener)

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