

# SIGMAPRIME® 200 LT SERIES

## DESCRIPTION

Universal epoxy anticorrosive primer, based upon pure epoxy technology

## PRINCIPAL CHARACTERISTICS

- Universal epoxy primer system suitable for ballast tanks, deck, topside, superstructure, hull, cargo oil tanks and cargo holds
- Excellent anticorrosive properties and water resistance
- Surface tolerant primer
- Good chemical resistance
- Good abrasion resistance for dedicated areas of application
- 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
- Suitable for bulk supply and twin feed application

## COLOR AND GLOSS LEVEL

- Alu light, alu yellow, gray, yellow/green, redbrown
- Eggshell

Note: Alu Light and Alu Yellow are available with SIGMAPRIME 200K version

## BASIC DATA AT 10°C (50°F)

Data for mixed product	
Number of components	Two
Mass density	SIGMAPRIME 200 LT: 1.3 kg/l (10.8 lb/US gal) SIGMAPRIME 200 LT K: 1.4 kg/l (11.7 lb/US gal)
Volume solids	SIGMAPRIME 200 LT: 57 ± 2% SIGMAPRIME 200 LT K: 60 ± 2%
VOC (Supplied)	Directive 1999/13/EC, SED: max. 331 g/kg (SIGMAPRIME 200 LT) max. 437.0 g/l (approx. 3.6 lb/gal) (SIGMAPRIME 200 LT) Directive 1999/13/EC, SED: max. 291 g/kg (SIGMAPRIME 200 LT K) max. 397.0 g/l (approx. 3.3 lb/gal) (SIGMAPRIME 200 LT K)
Recommended dry film thickness	See spreading rate tables
Theoretical spreading rate	SIGMAPRIME 200 LT: 7.6 m <sup>2</sup> /l for 75 µm (305 ft <sup>2</sup> /US gal for 3.0 mils) SIGMAPRIME 200 LT K: 6.0 m <sup>2</sup> /l for 100 µm (241 ft <sup>2</sup> /US gal for 4.0 mils)
Dry to touch	3 hours
Overcoating Interval	See overcoating tables
Full cure after	7 days



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## Data for mixed product

<b>Shelf life</b>	Base: at least 24 months when stored cool and dry Hardener: at least 24 months when stored cool and dry
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### Notes:

- See ADDITIONAL DATA – Spreading rate and film thickness
- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time

## 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)
- Steel with approved zinc silicate shop primer; weld seams and areas of damaged shop primer or breakdown should be blast cleaned to ISO-Sa2½, blasting profile 30 - 75 µm (1.2 – 3.0 mils) or power tool cleaned to SPSS-Pt3
- Previous coat must be sound, dry and free from any contamination

### IMO-MSC.215(82) Requirements for Water Ballast Tanks and IMO-MSC.288(87) for Cargo tanks of Crude Oil Tankers (specified areas only)

- 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 or at least equivalent process before painting
- Steel or steel with not approved zinc silicate shop primer; blast cleaned (dry or wet) to ISO-Sa2½, blasting profile 30 - 75 µm (1.2 – 3.0 mils)
- 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



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## **Substrate temperature and application conditions**

- Substrate temperature during application and curing should be between -20°C (-4°F) and 15°C (59°F)
- Ambient temperature during application at -20°C (-4°F) is acceptable; however curing to hardness takes longer and complete cure will be reached when the temperature increases
- 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%

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## **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 5°C (41°F), otherwise extra thinner may be required to obtain application viscosity
- Thinner should be added after mixing the components
- Adding too much thinner results in reduced sag resistance

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### **Induction time**

None

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### **Pot life**

7 hours at 10°C (50°F)

Note: See ADDITIONAL DATA – Pot life

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### **Air spray**

#### **Recommended thinner**

THINNER 91-92

#### **Volume of thinner**

0 - 15%, 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 - 15%, 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 – SIGMAPRIME 200 LT	
DFT	Theoretical spreading rate
75 µm (3.0 mils)	7.6 m <sup>2</sup> /l (305 ft <sup>2</sup> /US gal)
125 µm (5.0 mils)	4.6 m <sup>2</sup> /l (183 ft <sup>2</sup> /US gal)
160 µm (6.3 mils)	3.6 m <sup>2</sup> /l (145 ft <sup>2</sup> /US gal)
200 µm (8.0 mils)	2.9 m <sup>2</sup> /l (114 ft <sup>2</sup> /US gal)

Note: Max. dft: Dry Film Thickness of 2000 µm (80.0 mils) may occur occasionally (minor areas) where multiple overlapping is unavoidable (i.e. around scallops, corners, erection joint lines etc.). PPG must be consulted in case of DFT readings fall outside this recommendation.

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Spreading rate and film thickness – SIGMAPRIME 200 LT K	
DFT	Theoretical spreading rate
100 µm (4.0 mils)	6.0 m <sup>2</sup> /l (241 ft <sup>2</sup> /US gal)
125 µm (5.0 mils)	4.8 m <sup>2</sup> /l (192 ft <sup>2</sup> /US gal)
160 µm (6.3 mils)	3.8 m <sup>2</sup> /l (153 ft <sup>2</sup> /US gal)
200 µm (8.0 mils)	3.0 m <sup>2</sup> /l (120 ft <sup>2</sup> /US gal)

Note: Max. dft: Dry Film Thickness of 2000 µm (80.0 mils) may occur occasionally (minor areas) where multiple overlapping is unavoidable (i.e. around scallops, corners, erection joint lines etc.). PPG must be consulted in case of DFT readings fall outside this recommendation.

Overcoating interval for DFT up to 160 µm (6.3 mils)						
Overcoating with...	Interval	-15°C (5°F)	-5°C (23°F)	0°C (32°F)	10°C (50°F)	15°C (59°F)
various two-component epoxy coatings	Minimum	48 hours	24 hours	16 hours	6 hours	4 hours
	Maximum exposed to direct sunshine	2 months	2 months	2 months	1 month	1 month
	Maximum NOT exposed to direct sunshine	3 months	3 months	3 months	2 months	1 month

Note: Surface should be dry and free from any contamination

Curing time for DFT up to 160 µm (6.3 mils)			
Substrate temperature	Dry to touch	Dry to handle	Full cure
-10°C (14°F)	20 hours	48 hours	21 days
-5°C (23°F)	10 hours	21 hours	14 days
5°C (41°F)	5 hours	10 hours	9 days
10°C (50°F)	3 hours	6 hours	7 days
15°C (59°F)	2 hours	4 hours	5 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
5°C (41°F)	10 hours
10°C (50°F)	7 hours



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## 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

• 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
204702	SIGMAPRIME 200 LT: yellow/green	4009002200 (202390 base, 215871 hardener)
211283	SIGMAPRIME 200 LT: grey	9515052200 (211282 base, 215871 hardener)
244824	SIGMAPRIME 200 LT K: grey	9515052150 (243529 base, 242356 hardener)
244827	SIGMAPRIME 200 LT K: redbrown	2008002150 (243540 base, 242356 hardener)
330750	SIGMAPRIME 200 LT K: alu light	9000002150 (330748 base, 242356 hardener)
330753	SIGMAPRIME 200 LT K: alu yellow	9300002150 (330751 base, 242356 hardener)

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