

SIGMAPRIME® 200

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
- Suitable on wet blast cleaned substrates (damp or dry)

COLOR AND GLOSS LEVEL

- Gray, yellow/green and redbrown
- Low sheen

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.4 kg/l (11.7 lb/US gal)
Volume solids	60 ± 2%
VOC (Supplied)	Directive 2010/75/EU, SED: max. 287.0 g/kg max. 392.0 g/l (approx. 3.3 lb/US gal)
Recommended dry film thickness	100 - 250 µm (4.0 - 10.0 mils) depending on system
Theoretical spreading rate	6.0 m ² /l for 100 µm (241 ft ² /US gal for 4.0 mils)
Dry to touch	1.5 hours
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

Immersion exposure

- 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 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
- Coated steel; hydrojetted to VIS WJ2L (blasting profile 30 - 75 µm (1.2 - 3.0 mils))
- Primed steel or previous coat must be 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 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 Sa2½ 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.
- Primed steel or 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 cleaned by solvent or roughened by sandpaper
- Coated steel; hydrojetted to VIS WJ2L (blasting profile 30 - 75 µm (1.2 - 3.0 mils))
- Primed steel or 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 (37°F) above dew point
- Relative humidity during application and curing should not exceed 85%

Galvanized steel

- The surface must be properly prepared, dry, clean and free of any contamination
- The surface should be sufficiently roughened by sweep blasting to achieve a uniform matt appearance
- Sweep blast in accordance with the SSPC SP16 guidelines

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INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 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
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Pot life

7 hours at 20°C (68°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.)

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.)

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Brush/roller**Recommended thinner**

No extra thinner is necessary

Volume of thinner

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

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	Theoretical spreading rate
100 µm (4.0 mils)	6.0 m ² /l (241 ft ² /US gal)
125 µm (5.0 mils)	4.8 m ² /l (193 ft ² /US gal)
160 µm (6.3 mils)	3.8 m ² /l (153 ft ² /US gal)
200 µm (8.0 mils)	3.0 m ² /l (120 ft ² /US gal)

Note:

- Max. DFT: DFT 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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Overcoating interval for DFT up to 160 µm (6.3 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, various two-pack epoxy coatings and single pack coatings	Minimum	13 hours	6 hours	2.5 hours	1.5 hours	1 hours
	Maximum NOT exposed to direct sunshine	6 months	6 months	6 months	6 months	6 months
	Maximum exposed to direct sunshine	3 months	3 months	3 months	3 months	3 months
various two-pack polyurethane coatings	Minimum	13 hours	6 hours	2.5 hours	1.5 hours	1 hour
	Maximum NOT exposed to direct sunshine	6 months	6 months	6 months	6 months	6 months
	Maximum exposed to direct sunshine	10 days	10 days	7 days	7 days	5 days

Note:

- Surface should be dry and free from any contamination

Curing time for DFT up to 160 µm (6.3 mils)			
Substrate temperature	Full cure	Dry to touch	Dry to handle
5°C (41°F)	21 days	5 hours	14 hours
10°C (50°F)	14 days	3 hours	8 hours
20°C (68°F)	7 days	1.5 hours	4 hours
30°C (86°F)	5 days	45 minutes	2.5 hours
40°C (104°F)	4 days	30 minutes	1.5 hours

Note:

- Adequate ventilation must be maintained during application and curing

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

- 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 & 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

- Information sheet | Explanation of product data sheets
- Guide | PPG SIGMACARE PLUS | Online guide to maintenance at sea

WARRANTY

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