SIGMAPRIME® 700 HSV LT

DESCRIPTION

Universal High Solids Epoxy anticorrosive primer based upon pure epoxy technology

PRINCIPAL CHARACTERISTICS

- Universal pure epoxy primer system suitable for Ballast Tanks, Decks, Topside, Superstructure, Hull and Cargo Oil Tanks
- Excellent adhesion to steel, non-ferrous metals and previously coated surfaces
- Excellent anticorrosive properties and water resistance
- Good abrasion resistance for dedicated areas of application
- Good flow and wetting properties
- Cures even at temperatures down to -10°C (14°F)
- Suitable for touching up of weld seams and damages of epoxy coatings during construction
- Can be overcoated with most alkyd, epoxy and polyurethane coatings
- Compatible with well-designed cathodic protection systems
- Suitable on wet blast or ultra high pressure water (UHPWW) cleaned substrates (damp or dry)

COLOR AND GLOSS LEVEL

- Gray, yellow/green and redbrown
- Eggshell

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.5 kg/l (12.3 lb/US gal)
Volume solids	83 ± 2%
VOC (Supplied)	Directive 1999/13/EC, SED: max. 132.0 g/kg max. 194.0 g/l (approx. 1.62 lb/US gal) EPA Method 24: 173.0 g/l (1.4 lb/US gal)
Recommended dry film thickness	100 - 250 µm (4.0 - 10.0 mils) depending on system
Theoretical spreading rate	6.6 m^2/l for 125 µm (266 ft^2/US gal for 5.0 mils) 5.2 m^2/l for 160 µm (211 ft^2/US gal for 6.3 mils)
Dry to touch	6 hours
Full cure after	7 days
Shelf life	Base: at least 18 months when stored cool and dry Hardener: at least 24 months when stored cool and dry

Notes:

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

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RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Immersion exposure

- Steel or steel with not appoved 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 dry and free from any contamination
- At freezing temperatures surface must be free from ice
- Coated steel; hydrojetted to VIS WJ2L (blasting profile 30 – 75 µm (1.2 – 3.0 mils))

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 appoved 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.
- Previous coat must be dry and free from any contamination
- At freezing temperatures surface must be free from ice

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
- At freezing temperatures surface must be free from ice
- Coated steel; hydrojetted to VIS WJ2L (blasting profile 30 – 75 µm (1.2 – 3.0 mils))

Substrate temperature and application conditions

- Substrate temperature during application and curing should be above -10°C (14°F)
- Substrate temperature during application and curing down to -10°C (14°F) is acceptable; however curing to hardness takes longer and complete resistance will be reached when the temperature increases
- 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%

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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

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 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
- Adding too much thinner results in reduced sag resistance
- Thinner should be added after mixing the components

Pot life

3 hours at 10°C (50°F)

Note:

- See ADDITIONAL DATA – Pot life

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 - 10%, 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

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	**Theoretical spreading rate**
100 µm (4.0 mils)	8.3 m^2/l (333 ft^2/US gal)
125 µm (5.0 mils)	6.6 m^2/l (266 ft^2/US gal)
160 µm (6.3 mils)	5.2 m^2/l (211 ft^2/US gal)
200 µm (8.0 mils)	4.2 m^2/l (166 ft^2/US gal)

Note:

- Max. DFT: DFT of 1500 µm (59.0 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**	**-10°C (14°F)**	**-5°C (23°F)**	**0°C (32°F)**	**5°C (41°F)**	**15°C (59°F)**
itself and various two-pack epoxy coatings	Minimum	48 hours	28 hours	21 hours	12 hours	6 hours
	Maximum NOT exposed to direct sunshine	2 months	2 months	2 months	1 month	1 month
	Maximum exposed to direct sunshine	1.5 months	1.5 months	1.5 months	21 days	21 days

Note:

- Surface should be dry and free from any contamination and ice

Overcoating interval for DFT up to 160 µm (6.3 mils)						
Overcoating with...	**Interval**	**-10°C (14°F)**	**-5°C (23°F)**	**0°C (32°F)**	**5°C (41°F)**	**15°C (59°F)**
SIGMADUR and one-component products, such as acrylics and alkyds	Minimum	52 hours	32 hours	24 hours	15 hours	8 hours
	Maximum	14 days	14 days	14 days	14 days	7 days

Note:

- Surface should be dry and free from any contamination and ice

Curing time for DFT up to 160 µm (6.3 mils)			
Substrate temperature	**Full cure**	**Dry to touch**	**Dry to handle**
-10°C (14°F)	21 days	28 hours	48 hours
-5°C (23°F)	14 days	22 hours	40 hours
0°C (32°F)	12 days	13 hours	26 hours
5°C (41°F)	9 days	10 hours	17 hours
10°C (50°F)	7 days	7 hours	12 hours
15°C (59°F)	5 days	5 hours	10 hours

Note:

- Adequate ventilation must be maintained during application and curing

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Pot life (at application viscosity)	
Mixed product temperature	**Pot life**
5°C (41°F)	6 hours
10°C (50°F)	4 hours

Product Qualifications

- Certified in accordance with IMO PSPC Res.215(82) – Water Ballast Tanks
- Certified in accordance with IMO PSPC Res.288(87) – Cargo Oil Tanks of Crude Oil Tankers
- Qualified for NORSOK M501:2022 System 7B

SAFETY PRECAUTIONS

- 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
- See Safety Data Sheet and product label for complete safety and precaution requirements

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

WARRANTY

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