

# SIGMAPRIME® 700 HSV

## 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
- Good abrasion resistance for dedicated areas of application
- Good adhesion to steel and galvanized steel and non-ferrous metal
- Good flow and wetting properties
- Good water and corrosion resistance
- Cures at temperatures down to 5°C (41°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

## 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. 135.0 g/kg<br>max. 199.0 g/l (approx. 1.66 lb/US gal)<br>EPA Method 24: 174.0 g/ltr (1.5 lb/US gal) |
| Recommended dry film thickness | 100 - 250 µm (4.0 - 10.0 mils) depending on system                                                                                  |
| Theoretical spreading rate     | 6.6 m²/l for 125 µm (266 ft²/US gal for 5.0 mils)<br>5.2 m²/l for 160 µm (211 ft²/US gal for 6.3 mils)                              |
| Dry to touch                   | 3 hours                                                                                                                             |
| Full cure after                | 7 days                                                                                                                              |
| Shelf life                     | Base: at least 12 months when stored cool and dry<br>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 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 dry and free from any contamination
  - Coated steel; hydrojetted to VIS WJ2L (blasting profile 30 – 75 µm (1.2 – 3.0 mils))
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### 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.
  - Previous coat must be dry and free from any contamination
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### 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
  - Existing pipelines may have to be cleaned first by scraper pigs and solvents
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### Substrate temperature and application conditions

- 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%
  - Substrate temperature during application and curing should be above 5°C (41°F)
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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**

2 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.)

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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.)

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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

## Cleaning solvent

- THINNER 90-53

## ADDITIONAL DATA

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

| 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 and various two-pack epoxy coatings           | Minimum                                | 20 hours   | 12 hours    | 6 hours     | 3 hours     | 2 hours      |
|                                                      | Maximum exposed to direct sunshine     | 28 days    | 28 days     | 28 days     | 21 days     | 14 days      |
|                                                      | Maximum NOT exposed to direct sunshine | 2 months   | 2 months    | 2 months    | 1 month     | 1 month      |

Note:

- Surface should be dry and free from any contamination

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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) |
| SIGMADUR and one-component products, such as acrylics and alkyds | Minimum  | 24 hours   | 15 hours    | 9 hours     | 5 hours     | 3 hours      |
|                                                                  | Maximum  | 14 days    | 14 days     | 7 days      | 7 days      | 7 days       |

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 |
| 5°C (41°F)                                  | 12 hours     | 20 hours      | 21 days   |
| 10°C (50°F)                                 | 8 hours      | 14 hours      | 14 days   |
| 15°C (59°F)                                 | 6 hours      | 11 hours      | 7 days    |
| 20°C (68°F)                                 | 4 hours      | 7 hours       | 5 days    |
| 30°C (86°F)                                 | 2 hours      | 5 hours       | 5 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)                         | 3 hours   |
| 20°C (68°F)                         | 2 hours   |
| 30°C (86°F)                         | 1.5 hours |

## 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.

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## REFERENCES

- Information sheet | Explanation of product data sheets

## 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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