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SIGMAGUARD™ 720

DESCRIPTION

Two-component, reinforced high solids tank coating, based upon polyamine adduct cured pure epoxy technology

PRINCIPAL CHARACTERISTICS

- Tank coating with good chemical resistance against a wide range of chemicals
- Meets the requirements of EI 1541 2.2 (coating systems for aviation fuel storage tanks and pipes)
- Short curing periods
- Good low-temperature curing
- Easy to clean

COLOR AND GLOSS LEVEL

- Light green, gray
- Gloss

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	78 ± 2%
VOC (Supplied)	Directive 2010/75/EU, SED: max. 163.0 g/kg max. 233.0 g/l (approx. 1.9 lb/US gal)
Recommended dry film thickness	125 - 160 µm (5.0 - 6.3 mils) depending on system
Theoretical spreading rate	6.2 m ² /l for 125 µm (250 ft ² /US gal for 5.0 mils)
Dry to touch	3 hours
Overcoating Interval	Minimum: 8 hours Maximum: 28 days
Full cure after	See curing table
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

Substrate conditions

- Steel; blast cleaned to a minimum of ISO-Sa2½, blasting profile 40 – 70 µm (1.6 – 2.8 mils)
 - Previous coat must be dry and free from any contamination
 - Surface of previous coat should be sufficiently roughened if necessary
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IMO-MSC.288(87) requirements for cargo tanks of crude oil tankers

- 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; blast cleaned to ISO-Sa2½, 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.
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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
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SYSTEM SPECIFICATION

System for chemical resistance according to the latest issue of the chemical resistance list.

- SIGMAGUARD 720: 125 µm (5.0 mils)
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System for cargo tanks of Crude Oil Tankers according to IMO resolution MSC.288(87).

- SIGMAGUARD 720: 160 µm (6.3 mils)
 - SIGMAGUARD 720: 160 µm (6.3 mils)
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INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 75:25 (3:1)

- 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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Induction time

Allow induction time before use

Mixed product induction time	
Mixed product temperature	Induction time
15°C (59°F)	15 minutes
20°C (68°F)	10 minutes
25°C (77°F)	5 minutes

Pot life

1.5 hours at 20°C (68°F)

Air spray

Recommended thinner

THINNER 91-92

Volume of thinner

5 - 15% for a one coat application of 125 µm (5.0 mils) DFT

Nozzle orifice

1.8 - 2.0 mm (approx. 0.070 - 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 - 10% for a one coat application of 125 µm (5.0 mils) DFT

Nozzle orifice

Approx. 0.53 - 0.69 mm (0.021 - 0.027 in)

Nozzle pressure

15.0 MPa (approx. 150 bar; 2176 p.s.i.)

Brush/roller

- For stripe coating and spot repair only

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Cleaning solvent

THINNER 90-53

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	Theoretical spreading rate
100 µm (4.0 mils)	7.8 m ² /l (313 ft ² /US gal)
125 µm (5.0 mils)	6.2 m ² /l (250 ft ² /US gal)
160 µm (6.3 mils)	4.9 m ² /l (199 ft ² /US gal)

Note: Maximum DFT when brushing: 100 µm (4.0 mils)

Overcoating interval for DFT up to 125 µm (5.0 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	32 hours	24 hours	8 hours	4 hours	3 hours
	Maximum	28 days	28 days	28 days	14 days	7 days

Note: Surface should be dry and free from any contamination

Curing time for DFT up to 125 µm (5.0 mils)		
Substrate temperature	Minimum curing time before transport of aliphatic petroleum products and ballast water and tanktest with seawater	Minimum curing time before transport of cargoes without note 4, 7, 8 or 11
5°C (41°F)	10 days	17 days
10°C (50°F)	7 days	14 days
15°C (59°F)	5 days	8 days
20°C (68°F)	3 days	5 days
30°C (86°F)	60 hours	4 days
40°C (104°F)	36 hours	3 days

Notes:

- Minimum curing time of SIGMAGUARD 720 tank coating system before transport of cargoes with note 4, 7, 8 or 11: 3 months
- For detailed information on resistance and resistance notes, please refer to the latest issue of the Tank coating Resistance List (TRIS)
- Adequate ventilation must be maintained during application and curing (please refer to INFORMATION SHEETS 1433 and 1434)

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Curing time for DFT up to 125 µm (5.0 mils)

Substrate temperature	Dry to touch
5°C (41°F)	7 hours - 8 hours
10°C (50°F)	5 hours - 6 hours
20°C (68°F)	2 hours - 3 hours

Pot life (at application viscosity)

Mixed product temperature	Pot life
15°C (59°F)	3 hours
20°C (68°F)	1.5 hours
25°C (77°F)	1 hour
30°C (86°F)	30 minutes

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

• CONVERSION TABLES	INFORMATION SHEET	1410
• 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
• SPECIFICATION FOR MINERAL ABRASIVES	INFORMATION SHEET	1491
• RELATIVE HUMIDITY – SUBSTRATE TEMPERATURE – AIR TEMPERATURE	INFORMATION SHEET	1650

SIGMAGUARD™ 720

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