SIGMAGUARD™ 720

OVERVIEW

- Place of origin: Indonesia
- Gloss level: Gloss
- Dry to touch: 3 hours
- Number of components: 2
- Color: Light green, gray

PRODUCT DETAIL

DESCRIPTION

Two-component, reinforced high solids polyamine adduct cured epoxy coating

PRINCIPAL CHARACTERISTICS

- Tank coating with good chemical resistance against a wide range of chemicals
- Short curing periods
- Good low-temperature curing
- Easy to clean
- Recognized corrosion control coating (Lloyd's Register)

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 1999/13/EC, 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 m²/l for 125 µm (250 ft²/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

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

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 rating "1 for dust size class "3", "4" or "5", lower dust size classes to be removed if visible on the surface to be coated without magnification (ISO 8502-3:1992)

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

SYSTEM SPECIFICATION

- SIGMAGUARD 720 TANKCOATING SYSTEM – SYSTEM SHEET 3320

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

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

Cleaning solvent: THINNER 90-53

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	**Theoretical spreading rate**
100 µm (4.0 mils)	7.8 m²/l (313 ft²/US gal)
125 µm (5.0 mils)	6.2 m²/l (250 ft²/US gal)
160 µm (6.3 mils)	4.9 m²/l (199 ft²/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)

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.