PHENGUARD™ SUBSEA 610

DESCRIPTION

Two-component, high-build, amine adduct-cured novolac phenolic epoxy primer

PRINCIPAL CHARACTERISTICS

- Subsea primer for 2-coat system with PHENGUARD SUBSEA 780
- Excellent resistance to high temperature cathodic protection
- Meets the requirements of Norsok M-501 Rev. 6, System 7C (180°C / 356°F)
- Excellent resistance to seawater immersion
- Very good corrosion control
- Good application properties

COLOR AND GLOSS LEVEL

- Reddish gray
- Eggshell

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.7 kg/l (14.2 lb/US gal)
Volume solids	66 ± 2%
VOC (Supplied)	Directive 1999/13/EC, SED: max. 191.0 g/kg max. 315.0 g/l (approx. 2.6 lb/US gal)
Recommended dry film thickness	175 µm (7.0 mils)
Theoretical spreading rate	3.8 m^2/l for 175 µm (151 ft^2/US gal for 7.0 mils)
Dry to handle	8 hours
Overcoating Interval	Minimum: 3 hours Maximum: 21 days
Shelf life	Base: at least 24 months when stored cool and dry Hardener: at least 12 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
- Please contact a PPG representative when shelf life extension is needed

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RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Substrate conditions

- Steel should be blast cleaned in situ to at least ISO-Sa2½
- Blasting profile 50 – 100 µm (2.0 – 4.0 mils)
- Steel must be free from rust, scale, shop primer and any other contamination

Substrate temperature and application conditions

- Substrate temperature during application and curing should be above 10°C (50°F)
- Substrate temperature during application and curing should be at least 3°C (5°F) above dew point

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 7.33:1

- The temperature of the paint 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

Table of Induction time

Mixed product induction time	
Mixed product temperature	**Induction time**
15°C (59°F)	20 minutes
20°C (68°F)	15 minutes
30°C (86°F)	10 minutes

Pot life

4 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

2 - 15%, depending on required thickness and application conditions

Nozzle orifice

2.0 mm (approx. 0.079 in)

Nozzle pressure

0.3 MPa (approx. 3 Bar; 44 p.s.i.)

Airless spray

Recommended thinner

THINNER 91-92

Volume of thinner

2 - 10%, depending on required thickness and application conditions

Nozzle orifice

Approx. 0.46 – 0.53 mm (0.018 – 0.021 in)

Nozzle pressure

15.0 - 20.0 MPa (approx. 150 - 200 bar; 2176 - 2901 p.s.i.)

Brush/roller

- Brush: for stripe coating and spot repair only

Recommended thinner

THINNER 91-92

Volume of thinner

2 – 10%

Cleaning solvent

- THINNER 90-53

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ADDITIONAL DATA

Spreading rate and film thickness	
DFT	**Theoretical spreading rate**
175 µm (7.0 mils)	3.8 m^2/l (151 ft^2/US gal)

Note:

- Maximum DFT when brushing: 80 µm (3.1 mils)

Overcoating interval for DFT up to 175 µm (7.0 mils)						
Overcoating with...	**Interval**	**10°C (50°F)**	**15°C (59°F)**	**20°C (68°F)**	**30°C (86°F)**	**40°C (104°F)**
itself and PHENGUARD SUBSEA 780	Minimum	16 hours	6 hours	3 hours	3 hours	2 hours
	Maximum	28 days	25 days	21 days	14 days	7 days

Note:

- Surface should be dry and free from any contamination

Curing time for DFT up to 175 µm (7.0 mils)		
Substrate temperature	**Dry to handle**	**Full cure**
10°C (50°F)	16 hours	5 days
15°C (59°F)	12 hours	4 days
20°C (68°F)	8 hours	3 days
30°C (86°F)	6 hours	48 hours

Notes:

- Adequate ventilation must be maintained during application and curing
- The coating should be allowed to cure for 24 hours at the same temperature, with sufficient ventilation, before it is exposed to lower temperatures

Pot life (at application viscosity)	
Mixed product temperature	**Pot life**
10°C (50°F)	6 hours
20°C (68°F)	4 hours
30°C (86°F)	1.5 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

- Guide | PPG PHENGUARD | Subsea application and repair guidelines (3-layer system)
- Guide | PPG PHENGUARD | Subsea application and repair guidelines (2-layer system)
- Information sheet | Explanation of product data sheets

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