

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
Full cure after	See curing table
Shelf life	Base: at least 24 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
- See ADDITIONAL DATA – Spreading rate and film thickness

PHENGUARD™ SUBSEA 610

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 88:12

- 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

Induction time

Allow induction time before use

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)

PHENGUARD™ SUBSEA 610

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

PHENGUARD™ SUBSEA 610

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

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

PHENGUARD™ SUBSEA 610

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

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