

PHENGUARD™ SUBSEA 780

DESCRIPTION

Two-component, amine adduct-cured phenolic epoxy finish

PRINCIPAL CHARACTERISTICS

- Finish coat for coating system, used for the protection of subsea equipment
- Bright color to assist location by ROV
- Excellent resistance to seawater immersion
- Very good corrosion control
- Excellent high-temperature resistance in immersed conditions
- Good application properties, resulting in a smooth surface
- Meets the requirements of Norsok M-501 rev. 6, system 7C

COLOR AND GLOSS LEVEL

- RAL 1004, RAL 1018, RAL 2004 (other colors available on request)
- Eggshell

Note: Color is approximate and will be subject to some degree of drift over time

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)	EPA Method 24: 300.0 g/ltr (2.5 lb/USgal)
Recommended dry film thickness	100 - 175 µm (4.0 - 7.0 mils) depending on system
Theoretical spreading rate	6.6 m ² /l for 100 µm (265 ft ² /US gal for 4.0 mils) 3.8 m ² /l for 175 µm (151 ft ² /US gal for 7.0 mils)
Dry to touch	2 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



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RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Substrate conditions

- Previous coat of approved coating must be dry and free from any contamination
- Substrate must be dry, free from oil, grease and any contamination

Substrate temperature and application conditions

- Substrate temperature during application and curing should be above 10°C (50°F)
- Substrate temperature during application 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

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

Air spray

Recommended thinner

THINNER 91-92

Volume of thinner

2 - 10%, 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.)



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

Cleaning solvent

THINNER 90-53

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	Theoretical spreading rate
100 µm (4.0 mils)	6.6 m ² /l (265 ft ² /US gal)
125 µm (5.0 mils)	5.3 m ² /l (212 ft ² /US gal)
175 µm (7.0 mils)	3.8 m ² /l (151 ft ² /US gal)

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	Minimum	16 hours	6 hours	3 hours	3 hours	2 hours
	Maximum	28 days	25 days	21 days	14 days	7 days

Notes:

- Surface should be dry and free from any contamination
- When needs to walk on for topcoat, min. recoat time should be same as dry to handle time to avoid damage on coated system

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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

Note: Adequate ventilation must be maintained during application and curing (please refer to INFORMATION SHEETS 1433 and 1434)

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
40°C (104°F)	30 minutes

Product Qualifications

- Qualified for NORSOK M501 Rev.6 System 7C up to 150°C(302°F) with 3 coating system (Phenguard 930 / 935 / Phenguard Subsea 780 system)
- Qualified for NORSOK M501 Rev.6 System 7C up to 180°C(356°F) with 2 coating system (Phenguard Subsea 610 Primer)

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
- This product contains a substance that is the subject of a TSCA 5a Significant New Use Rule (SNUR) [to be published]

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.



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REFERENCES

• 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
• DIRECTIVES FOR VENTILATION PRACTICE	INFORMATION SHEET	1434
• APPLICATION GUIDELINES FOR PHENGUARD SUBSEA SYSTEMS	INFORMATION SHEET	P110

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