

SELECTION & SPECIFICATION DATA

Generic Type	High Performance Polyurethane
Description	A “coal tar free”, high performance two-component polyurethane coating engineered for applications in Marine, Industrial and Pipeline industries. This low friction, high abrasion and impact resistant coating is used on exterior hulls to reduce ad-freezing of ships provide abrasion and corrosion protection. Further, it is used to coat marine pilings and docks where impact and abrasion resistance is required and cathodic protection is utilized. Available in Spray Grade and Brush Grade.
Features	<ul style="list-style-type: none"> • Excellent resistance to high temperature cathodic disbonding up to 65°C (149°F) • Excellent adhesion to steel surfaces, Fusion Bond Epoxy (FBE), Fiber Reinforced Plastic (FRP) and concrete • High build one-coat application • 100% solids – Does not contain coal tar • Excellent fresh and salt water, impact and abrasion resistance
Typical Uses	<ul style="list-style-type: none"> • Ship hulls • Decks • Use on girth welds • Hot bends on pipelines operating at high temperatures
Color	Grey (0700)
Primer	No primer required on steel. SP-1264® Damp Concrete Primer Sealer required prior to application of this product to concrete.
Dry Film Thickness	508 - 2540 microns (20 - 100 mils) DFT Depends upon application. Consult with SPC Representative.
Solids Content	By Volume 100%
Theoretical Coverage Rate	39.4 m ² /l at 25 microns (1604 ft ² /gal at 1.0 mils) 2.0 m ² /l at 500 microns (80 ft ² /gal at 20.0 mils) 0.4 m ² /l at 2500 microns (16 ft ² /gal at 100.0 mils) Allow for loss in mixing and application.
VOC Values	As Supplied : 0 g/L
Specific Gravity	Base: 1.29±0.03 Hardener: 1.24±0.03 Mixed Material: 1.28±0.03

SUBSTRATES & SURFACE PREPARATION

Steel	Cleanliness: NACE No. 2/SSPC SP-10, SA 2.5 (ISO 8501-1) Profile: 75 microns minimum to 125 microns maximum (3.0 mils to 5.0 mils)
Concrete	Cleanliness: Remove laitance and other surface contaminants by grit blasting or mechanical scarification. Seal using SP-1264® Damp Concrete Primer Sealer.

SP-1864®

PRODUCT DATA SHEET



PERFORMANCE DATA (TYPICAL VALUES)

Service Temperature	Up to 65°C (149°F)
Adhesion to Steel (Pull Off Strength)	>27 MPa (>4000 psi) @ 25°C (77°F)(ASTM D4541)
Adhesion to Steel (Hot Water Soak)	60 days @ 80°C (176°F): Rating #1 (CSA-Z245.20)
Cathodic Disbondment Resistance	28 days @ 25°C (77°F) @ - 1.5 Volts: 3.50 mmR (CSA-Z245.20)
Impact Resistance	>8.1 Joules (>6.0 ft-lbf) @ 25°C (77°F) (CSA-Z245.20) >6.8 Joules (>5.0 ft-lbf) @ 0°C (32°F) (CSA-Z245.20) >2.0 Joules (>1.4 ft-lbf) @ -30°C (-22°F) (CSA-Z245.20)
Flexibility	2.50°PPD @ 25°C (77°F) (CSA-Z245.20) 1.50°PPD @ 0°C (32°F)(CSA-Z245.20) 0.50°PPD @ -30°C (-22°F) (CSA-Z245.20)
Elongation at Break	25°C (77°F) >30% (ASTM D522)
Volume Resistivity	1.0 x 10 ¹⁴ (ohm-cm) (ASTM D257)
Hardness	25°C (77°F): 78 Shore D (ASTM D2240)

MIXING & THINNING

Brush Grade Pot Life	8-10 minutes 200 gms mass @ 25°C (77°F)
Spray Grade Gel Time	4 minutes 30 seconds 200 gm mass @ Base @ 60°C (140°F) Activator @ 25°C (77°F)
Mixing	Spray Grade: Agitation of the Part A component is recommended during the preheating process and during application to ensure a uniform heat throughout the base portion. Component Details for Color: Grey (0700): The Base is Grey (0700) and the Hardener is Amber (0908)
Thinning	DO NOT THIN.
Ratio	3:1 Base to Activator, by volume

APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

Spray Grade	<p>Plural Component Spray Equipment: Graco XP-70 or equivalent Tip Size:: 0.019-0.031 0.031 Heated hose bundle consisting of 3/8" ID base and 1/4" ID hardener with a solvent flush line. Glycol heat trace or equivalent capable of 80°C (176°F)</p>
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APPLICATION CONDITIONS

Ambient Temperature | -10°C to 50°C (14°F to 122°F) maximum

Substrate Temperature | The acceptable substrate (metal or concrete surface) temperature range for the application is 1°C (33°F) to 100°C (212°F).
Preheating of the substrate is required if the surface to be coated is below 1°C (33°F).
Relative Humidity prior to and during the application must be 80% or less.
The substrate temperature must be a minimum of 3°C (5°F) above the dew point temperature before proceeding with the coating operation.

Material Temperature | Base: 60°C-65°C (140°F-149°F)
Activator: 25°C (77°F)

CURING SCHEDULE

Recoat Interval | Maximum 48 hours @ 25°C (77°F) @ 50% RH

This product is a one-coat application system. However, if there are areas below the specified thickness and the coating has cured beyond the specified re-coat window, roughening of the surface is necessary to ensure inter-coat adhesion.
Small areas ≤ 316 sq. cm. (≤ 49 sq. in.) may be sanded using a medium grit (80- 100) carborundum cloth.
All dust from the sanding or blast roughening must be removed from the surface prior to the application of the coating.

Surface Temp.	Touch Dry	Dry Hard (Spray Grade)
20°C (68°F)	2.5 Hours	5 Hours
40°C (104°F)	1 Hour	2.25 Hours
50°C (122°F)	35 Minutes	1.5 Hours
60°C (140°F)	22 Minutes	1 Hour
80°C (176°F)	18 Minutes	40 Minutes
90°C (194°F)	15 Minutes	35 Minutes

Substrate: 12 mm (0.50 inch) Thick Steel Panels

Note: The information above is to serve as a guide only. The test results were compiled under laboratory-controlled conditions, as per ASTM D1640. Field results may vary due to variable conditions such as radiant heat loss and the cooling effects of wind.

Full Cure | 4 days @ 25°C (77°F)

CLEANUP & SAFETY

Cleanup | Carboline Thinner 2 or SP-100 Equipment Wash

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CLEANUP & SAFETY

Safety | Refer to SPC's Safety Data Sheet prior to use. Carefully read and follow all safety instructions on labels and packaging. Handle and store material with care in accordance to the Safety Data Sheet. Follow and observe any applicable local or national laws and regulations.

PACKAGING, HANDLING & STORAGE

Shelf Life | Base: 24 months maximum
Activator: 12 months maximum

When kept at recommended storage conditions and in original unopened containers.

Storage Temperature & Humidity | 4°C to 49°C (40°F to 120°F)
0 to 95% Humidity

Storage | Store indoors and keep Dry. Do not place drums directly on concrete or earth. Store on top of wood slats or pallets. Blanket all partial drums with nitrogen gas to prevent moisture contamination. Avoid freezing. Do not open until ready to use. Rotate Resin (Part A) drums regularly if stored for the long term

Packaging - Spray Grade | **80 Liter (21.1 Gallon) Kit**
Part A: 60 liters (15.9 gallons)
Part B: 20 liters (5.3 gallons)
800 Liter (211.3 Gallon) Kit
Part A: 600 liters (158.5 gallons)
Part B: 200 liters (52.8 gallons)

Packaging - Brush Grade | **1 Liter (0.26 Gallon) Kit**
Part A: 0.75 liters (0.2 gallons)
Part B: 0.25 liters (0.06 gallons)
2 Liter (0.53 gallons) Kit
Part A: 1.5 liters (0.40 gallons)
Part B: 0.5 liters (0.13 gallons)

WARRANTY

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