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PRODUCT DATA SHEET

SP-1864[®]

DESCRIPTION: **SP-1864[®]** is an extremely tough “Coal Tar Free” 100% solids polyurethane coating with applications in Marine, Industrial and Pipeline industries. This low friction, abrasion and impact resistant coating is used on exterior hulls to reduce ad-freezing in addition to application to the ice-line of ships to reduce ice resistance and provide abrasion protection. Further, it is used to coat marine pilings and docks where impact and abrasion resistance is required and cathodic protection is utilized. **SP-1864[®]** is also well suited for use on girth welds, hot bends on pipelines operating at high temperatures, and cathodic disbonding resistance at temperatures up to 65°C (149°F). **SP-1864[®]** is available in Spray Grade. For Brush Grade application, use **SP-1853[®]**.

ADVANTAGES:

- 100% Solids – No VOCs.
- Excellent fresh and salt water resistance.
- Excellent impact and abrasion resistance.
- Excellent adhesion to steel surfaces, Fusion Bond Epoxy (FBE), Fiber Reinforced Plastic (FRP) and concrete.
- Excellent resistance to high temperature cathodic disbonding up to 65° (149°F).
- High build one-coat application.
- Lloyd’s Register of Shipping Approval.

USES:

- Coating of pipe intended for slip bore / directional drilling.
- Coating of ice transiting ship hulls and rudders.
- Coating of marine pilings and docks.
- Coating of ballast tanks.
- Coating of pipelines, valves, fittings and fabricated assemblies.
- Coating of girth welds.
- Rehabilitation (re-coating) of existing pipelines.
- Coating repairs.

APPLICATION:

- Spray Grade: Graco Hydra-Cat – Tip Size: .019 - .031

All information, recommendations, and test performance results herein were obtained in a controlled environment and SPC makes no claim that the data and tests accurately represent all environments and specific project specification requirements. As application, environmental and design factors can vary significantly, due care should be exercised in the selection and use of the coating. SPC products are sold with the understanding that the purchaser or user is solely responsible for determining their suitability for any purpose, and that the purchaser or user assumes all risks and liability associated with the use of the product. No guarantee, either expressed or implied, is made with respect thereto or with respect to the infringement of any patent. The information herein is not to be copied, used in evidence, released for publication, or public distribution without written permission from Specialty Polymer Coatings.



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- CLEANING MATERIALS:**
- SP-100 Equipment Wash
 - SP-110 Tool Cleaner
 - SP-120 Internal Storage Lubricant

SURFACE PREPARATION:

- (Steel Substrate)**
- **Primer** : No primer required.
 - **Cleanliness** : Near White
 - **Standards** : NACE 2, Sa 2½ (Swedish Scale, ISO 8501-1)
: SSPC SP-10 (Steel Structures Painting Council)
 - **Profile** : 75 microns minimum to 125 microns maximum
(3.0 mils to 5.0 mils)

- (Concrete Substrate)**
- **Primer** : SP-1264 Damp Concrete Primer Sealer required prior to application of **SP-1864[®]** to concrete.
 - **Cleanliness** : Remove laitance and other surface contaminants by grit blasting or mechanical scarification. Seal using SP-1264 Damp Concrete Primer Sealer.

- MIXING RATIO:**
- By Volume: 3 Parts Base to 1 Part Activator.

RECOMMENDED FILM THICKNESS:

- **Wet:** 0.50 mm minimum to 2.5 mm maximum (20 mils to 100 mils).
- **Dry:** 0.50 mm minimum to 2.5 mm maximum (20 mils to 100 mils). *
- For pipeline application requiring high temperature cathodic disbonding resistance up to 65°C (149°F), the recommended Dry Film Thickness is 1.75 mm to 2.0 mm (70-80 mils).

* Dry Film Thickness will vary depending upon the area of use or application.



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RE-COAT INTERVAL:

- 25°C (77°F) – Maximum: 16 Hours
90°C (194°F) – Maximum: 10 Minutes

- **SP-1864[®]** 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.

HANDLING PROPERTIES:

- Material Temperature Base 60°C (140°F) Activator 25°C (77°F)
Pot Life 3-4 Minutes
Dry Time (ASTM D1640) [Ambient Temperature 25°C (77°F)]
 Touch Dry Time 2.0 Hours
 Hard Dry Time..... 4.5 Hours
 Full Cure..... 4 Days
- Ambient Temperature -10°C (14°F) minimum to 50°C (122°F) maximum.
- Substrate Temperature..... The acceptable substrate (metal or concrete surface) temperature range for the application of **SP-1864[®]** 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 of **SP-1864[®]** 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. Preheating and post-heating may be required in cold weather applications to polyolefin surfaces.
- Storage / Shelf Life..... Store in a cool, dry, well-ventilated area at temperatures between 20°C (68°F) and 35°C (95°F). Keep the lids sealed.
DO NOT FREEZE THE ACTIVATOR.
The Shelf Life is a maximum of 12 months in unopened containers.

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LIQUID PROPERTIES:

BASE

ACTIVATOR

| | | |
|-------------------------------------|--|--------------|
| Appearance | Grey Liquid | Amber Liquid |
| Solids Content (%) | 100 | 100 |
| Specific Gravity (ASTM D1475) | Base & Activator Mixed: 1.30 | |
| Coverage (Theoretical) | 39.0 m ² /Litre/25 microns [1604 ft ² /U.S. Gallon/mil] | |

PHYSICAL / MECHANICAL / ELECTRICAL PROPERTIES:

Test Results for Panels with Dry Film Thickness of 1.75-2.00 mm (70-80 mils).

Adhesion to Steel:

| | |
|--|-------------|
| Dry Adhesion (Pull-off Strength) [MPa (psi)] (ASTM D4541-95-A4) (Self-Alignment Adhesion Tester, Type IV) [25°C (77°F)] | >27 (>4000) |
| Wet Adhesion (Hot Water Soak) (CSA-Z245.20-06, Clause 12.14) [Modified to 60 days at 80°C (176°F)] | Rating #1 |
| Cathodic Disbonding Test [Average Radius (mm)] [CSA-Z245.20-06, Clause 12.8, System 1A, 28 Days @ 25°C (77°F)] | 3.50 |
| Cathodic Disbonding Test [Average Radius (mm)] (CSA-Z245.20-06, Clause 12.8, System 1A, 28 Days @ 65°C (149°F)] | 11.00 |
| Elongation (%) (ASTM D522) [25°C (77°F)] | >30 |
| Flexibility (° PPD) (CSA-Z245.20-06, Clause 12.11) [25°C (77°F)] | 2.50 |
| Flexibility (° PPD) (CSA-Z245.20-06, Clause 12.11) [0°C (32°F)] | 1.50 |
| Flexibility (° PPD) (CSA-Z245.20-06, Clause 12.11) [-30°C (-22°F)] | 0.50 |
| Hardness (Shore D) (ASTM D2240-91) [25°C (77°F)] | 78 |
| Impact [Joules (ft-lbf)] (CSA-Z245.20-06, Clause 12.12) [25°C (77°F)] | 8.1 (6.0) |
| Impact [Joules (ft-lbf)] (CSA-Z245.20-06, Clause 12.12) [0°C (32°F)] | 6.8 (5.0) |
| Impact [Joules (ft-lbf)] (CSA-Z245.20-06, Clause 12.12) [-30°C (-22°F)] | 2.0 (1.4) |
| Indentation Resistance (%) (DIN EN 10290) | 1.93 |

SAFETY: Read the Material Safety Data Sheets before use.

EFFECTIVE DATE: October 21, 2016

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