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PRODUCT DATA SHEET

SP-1853[®]

DESCRIPTION: **SP-1853[®]** is a hybrid two-component polyurethane coating designed for long-term corrosion protection. It cures to a hard protective coating with excellent resistance to fresh and salt water. In addition, it offers good acid and abrasion resistance. **SP-1853[®]** is available in a Self-Levelling formulation that is ideal for use on concrete substrates where high impact, abrasion resistance and chemical resistance properties are required. This coating system has Lloyd's Register of Shipping approval. **SP-1853[®]** is available in Brush Grade. For Spray Grade application, use **SP-1864[®]**.

ADVANTAGES:

- 100% Solids – No VOCs.
- Excellent fresh and salt water resistance.
- Good impact and abrasion resistance.
- Excellent adhesion to steel surfaces, Fusion Bond Epoxy (FBE), Fiber Reinforced Plastic (FRP) and concrete.
- High build one-coat application.
- Lloyd's Register of Shipping Approval.

USES:

- Coating of ship decks.
- Coating of onshore and offshore structures.
- Coating of marine pilings
- Coating of steel and concrete substrates.
- Coating of pipelines, valves, fittings and fabricated assemblies.

APPLICATION:

- Brush Grade: Brush or Roller.

CLEANING MATERIALS:

- SP-100 Equipment Wash
- SP-110 Tool Cleaner
- SP-120 Internal Storage Lubricant



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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-1853[®]** 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 1.25 mm maximum (20 mils to 50 mils).
- **Dry:** 0.50 mm minimum to 1.25 mm maximum (20 mils to 50 mils).

RE-COAT INTERVAL:

- 25°C (77°F) – Maximum: 8 Hours
50°C (122°F) – Maximum: 1 Hour

- **SP-1853[®]** is a single application wet on wet two-coat 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.



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HANDLING PROPERTIES:

Pot Life [Ambient Temperature 25°C (77°F)]	30 minutes
Dry Time (ASTM D1640) [Ambient Temperature 25°C (77°F)]	
Touch Dry Time	2.5 Hours
Hard Dry Time.....	6 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-1853[®] 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-1853[®] 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.
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.

LIQUID PROPERTIES:

	<u>BASE</u>	<u>ACTIVATOR</u>
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]	



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PHYSICAL PROPERTIES:

Adhesion to Steel:

Dry Adhesion (Pull-off Strength) [MPa (psi)] (ASTM D4541-95-A4) (Self-Alignment Adhesion Tester, Type IV) [25°C (77°F)]	>13 (>2000)
Cathodic Disbonding Test (ASTM G8) [25°C (77°C)]	10 – 12
Dielectric Strength (volt / 10 ⁻³) (ASTM D149)	400
Dielectric Constant, 60 cycles (ASTM D150)	4.2
Elongation (%) (ASTM D638) [25°C (77°F)]	9
Flexibility Mandrel Bend Test (ASTM D522)	Pass ½"
Hardness (Shore D) (ASTM D2240-91) [25°C (77°F)]	75
Impact Strength [Joules (in-lbs)] (ASTM D-256) [25°C (77°F)]	20 (150)
Volume Resistivity (ohm-cm) (ASTM D257)	1.0 x 10 ¹⁴
Water Vapour Permeability [perm-cm (perm-in)] (ASTM D1434)	0.0018 (0.003)

CHEMICAL RESISTANCE (One week immersion @ ambient temperatures):

Nitric acid, 10% solution	No change observed.
Sulphuric acid, 5% solution	No change observed.
Acetic acid, 5% solution	No change observed.
Sodium hydroxide, 10% solution	No change observed.
Sodium chloride, 10% solution	No change observed.
Phosphoric acid, 10% solution	No change observed.
Mineral Oil	No change observed.

SAFETY: Read the Material Safety Data Sheets before use.

EFFECTIVE DATE: August 8, 2011