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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.

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

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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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 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.

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 δ 316 sq. cm. (δ 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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PRODUCT DATA SHEET

SP-1853^V

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 container lids sealed when not in use. The Shelf Life of SP-1853[®] Base is a maximum of 24 months from the date of manufacture if the materials are in unopened containers. The Shelf Life of SP-1853[®] Activator is a maximum of 12 months from the date of manufacture if the materials are in unopened containers. **DO NOT FREEZE THE ACTIVATOR.**

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 m²/Litre/25 microns [1604 ft²/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.

WEBSITE: www.spc-net.com

EFFECTIVE DATE: October 21, 2016 Rev. 3

SPC / SP-1853_PDS_09-04-12.doc

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