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Specialty Polymer Coatings  
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## PRODUCT DATA SHEET

## SP-2831 LOW TEMPERATURE CURE COATING

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**DESCRIPTION:** SP-2831 Low Temperature Cure Coating is a two-component epoxy coating that has the ability to **cure down to 0°C (32°F)**. It is used for applications in cool weather (fall / winter) where other coating systems would require preheating of the substrate or enclosure and application of external heat for curing purposes. SP-2831 Low Temperature Cure Coating is ideal for utilization on facilities operating at low temperatures, which precludes the use of preheating / external heat.

**ADVANTAGES:**

- 100% Solids – No VOCs.
- High build single coat application.
- Isocyanate free.
- Excellent cathodic disbonding performance at temperatures up to 65°C (149°F).
- Excellent adhesion to grit blasted steel surfaces, Fusion Bond Epoxy (FBE) and Fiber Reinforced Plastic (FRP).

**USES:**

- Coating of pipe, valves and fittings.
- Coating of girth welds.
- Coating rehabilitation of existing pipelines.
- Coating repairs.

**APPLICATION:**

- Spray Grade: Graco Hydra-Cat - Tip Size: 0.019 - 0.031
- Brush Grade: Brush or Roller

**CLEANING MATERIALS:**

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

**SURFACE PREPARATION:**  
(Steel Substrate)

- **Cleanliness:** Near White
- **Standards:** NACE 2, Sa 2 ½ (Swedish Scale, ISO 8501-1)  
SSPC SP-10 (Steel Structures Painting Council)
- **Profile:** 62.5 microns minimum to 125 microns maximum  
(2.5 mils to 5.0 mils)



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**MIXING RATIO:** Brush Grade or Spray Grade, By Volume: 3 Parts Base to 1 Part Hardener

**RECOMMENDED FILM THICKNESS:**

- **Wet:** 0.50 mm (20 mils) minimum
- **Dry:** 0.50 mm (20 mils) minimum
- Depends upon the application; consult with SPC Representative.

**RE-COAT INTERVAL:**

Temperature	Minimum Re-coat Interval	Maximum Re-coat Interval
15°C (59°F)	1.5 Hours	4 Hours
10°C (50°F)	2.5 Hours	5 Hours
5°C (41°F)	4 Hours	20 Hours
0°C (32°F)	10 Hours	30 Hours

**HANDLING PROPERTIES:**

Pot Life [25°C (77°F)] ..... 12 ± 3 minutes

Dry Time [ASTM D1640 @ 0°C (32°F)]

Touch Dry Time ..... 10 Hours

Dry Hard Time ..... 18 Hours

Substrate Temperature..... At applications near 0°C (32°F), care must be taken as ice crystals may be present in the surface pores of the steel. The substrate temperature should be a minimum of 3°C (5°F) above the dew point temperature to avoid the risk of condensation. Refer to the Curing Table (Appendix “A”).

Storage / Shelf Life ..... Store in a cool, dry, well-ventilated area at temperatures between 5°C (41°F) and 40°C (104°F). Keep in a tightly sealed container when not in use. The Shelf Life of SP-2831 Low Temperature Cure Coating is a maximum of 24 months from the date of manufacture if the materials are in unopened containers.



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**LIQUID PROPERTIES:**

**BASE**

**HARDENER**

Appearance.....	Grey Liquid.	Amber Liquid.
Volume Solids Content (%) .....	100	100
Specific Gravity (ASTM D1475).....	1.57 ± 0.03	1.03 ± 0.03
Specific Gravity (ASTM D1475).....	Base & Hardener Mixed:	1.44 ± 0.03
Coverage (Theoretical).....	Base & Hardener Mixed:	39.0 m <sup>2</sup> /Litre/25 microns [1604 ft <sup>2</sup> /U.S. Gallon/mil]

**PHYSICAL PROPERTIES:**

Adhesion to Steel:

Dry Adhesion (Pull-off Strength) [MPA (psi)] (ASTM D4541-95-A4)	
Self-Alignment Adhesion Tester, Type IV	
Coating applied & cured @ 0°C (32°F) .....	13.94 (2022)
Wet Adhesion (Hot Water Soak) (CSA-Z245.20-10, Clause 12.14, 28 Days)	
[75°C (167°F)].....	Rating #1
Cathodic Disbonding Test [Average Radius (mm)]	
[CSA-Z245.20-10, Clause 12.8, 1.5V, 28 Days @ 65°C (149°F)]	
Coating applied and cured @ 0°C (32°F).....	9.1
Coating applied and cured @ 21°C (69.8°F).....	8.2
Hardness [Shore D, ASTM D2240-86, Coating applied & cured @ 0°C (32°F)].....	80
Impact [Joules (ft-lbf)] [CSA-Z245.20-10, Clause 12.12, 0°C (32°F)] .....	1.5 (1.10)

**SAFETY:** Read the Material Safety Data Sheets before use.

**EFFECTIVE DATE:** February 7, 2014 Rev. 1

# APPENDIX “A”



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## SP-2831 LOW TEMPERATURE CURE COATING

### CURING TABLE

SUBSTRATE TEMPERATURE	Dry Hard Time	
	Brush Grade	Spray Grade
0°C (32°F)	18 Hours	18 Hours
5°C (41°F)	10 Hours	10 Hours
10°C (50°F)	8 Hours	7 Hours
15°C (59°F)	--	6 Hours
20°C (68°F)	5 Hours	--
25°C (77°F)	3 Hours	3 Hours
50°C (122°F)	1 Hour 25 Minutes	--

Spray Grade Material Temperature: Base 60°C (140°F)  
Hardener 35-40°C (95-104°F)

Brush Grade Material Temperature: Base 25°C (77°F)  
Hardener 25°C (77°F)

Dry Film Thickness: 0.50-0.63 mm (20-25 mils) as per ASTM D1640

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

Date: October 17, 2006