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PRODUCT DATA SHEET

SP-1866 HTP

DESCRIPTION: **SP-1866 HTP (High Temperature Polyurethane)** is a “Coal Tar Free” 100% Solids Polyurethane coating designed for pipeline operating at high temperature. **SP-1866 HTP** coating can also be used in Industrial applications where the acid resistance and superior abrasion resistance properties of Polyurethane coating are required. Single coat application provides superior adhesion, impact and chemical resistance.

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 treated Three-layer Polyethylene (3LPE) or Three-layer Polypropylene (3LPP) coated pipe.
- Excellent high temperature cathodic disbonding resistance at temperatures up to 80°C (176°F).
- Fast Cure, excellent for pipe rehabilitation, minimizing the need for coating repairs due to bugs or debris sticking to wet coating.

USES:

- Coating of pipe intended for slip bore or directional drilling.
- Coating of pipelines, valves, fittings, and fabricated assemblies.
- Coating of girth welds.
- Rehabilitation (re-coating) of existing pipelines.
- Abrasion resistant slurry lining in the mining industry.

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



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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)

- MIXING RATIO:**
- By Volume: 2 Parts Base to 1 Part Activator.

RECOMMENDED FILM THICKNESS:

- **Wet:** 0.75 mm minimum to 2.54 mm maximum (30 mils to 100 mils)
- **Dry:** 0.75 mm minimum to 2.54 mm maximum (30 mils to 100 mils)
- **The coating thickness depends upon the type of application or specification.**

RE-COAT INTERVAL:

- 25°C (77°F) Maximum: 5 Hours
- **SP-1866 HTP** 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.



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HANDLING PROPERTIES:

Pot Life:

Base 60°C (140°F)	Activator 25°C (77°F)	30 Seconds
Base 50°C (122°F)	Activator 25°C (77°F)	45 Seconds
Base 40°C (104°F)	Activator 25°C (77°F)	1.00 Minute
Base 25°C (77°F)	Activator 25°C (77°F)	3.00 Minutes

Dry Time (ASTM D1640) [25°C (77°F)]:

Tack-Free Time	8 Minutes
Dry Hard Time.....	30 Minutes

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

Substrate Temperature.... The acceptable substrate (metal) temperature range for the application of **SP-1866 HTP** is 1°C (33°F) to 60°C (140°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-1866 HTP** 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:	1.33 ± 0.03
Coverage (Theoretical)	Base & Activator Mixed:	39.0 m ² /Litre/25 microns [1604 ft ² /U.S. Gallon/mil]

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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PHYSICAL / MECHANICAL / ELECTRICAL PROPERTIES:

Test Results for Panels with Dry Film Thickness between 1.50-2.0 mm (60-80 mils).

Taber Abrasion Resistance [Average Weight Loss (gm)] (ASTM D4060-07) (CS-17 Wheel, 1000 gm load, after 1000 cycles).....	0.0859
Adhesion to Steel:	
Adhesion Resistance to removal (EN 10290 Annex D)	
[25°C (77°F)]	Rating #1
[80°C (176°F)]	Rating #1
Dry Adhesion (Pull-off Strength) [MPa (psi)] (ASTM D4541-95-A4) (Self-Alignment Adhesion Tester, Type IV)	
[25°C (77°F)]	>27 (>4000)
[80°C (176°F)]	>10 (>1500)
Wet Adhesion (Hot Water Soak) (CSA-Z245.20-06, Clause 12.14, 28 Days)	
[60°C (140°F)]	Rating #1
[80°C (176°F)]	Rating #2
Wet Adhesion (Hot Water Soak) (NACE PR O394:02 Annex J and EN 10290 Annex D)	
[60°C (140°F)]	Rating #1
[80°C (176°F)]	Rating #2
Cathodic Disbonding Test [Average Radius (mm)] (EN 10290 Annex E)	
28 days, [25°C (77°F)]	<6.00
2 days, [60°C (140°F)]	<4.00
2 days, [80°C (176°F)]	<6.00
Cathodic Disbonding Test [Average Radius (mm)] (CSA-Z245.20-06, Clause 12.8, System 1A)	
28 days, [60°C (140°F)]	9.80
28 days, [80°C (176°F)]	15.00
Elongation (%) (ASTM D522-93A) [25°C (77°F)]	<10.00
Flexibility (° PPD) (CSA-Z245.20-06, Clause 12.11) [21°C (70°F)]	0.75
Flexibility (° PPD) (CSA-Z245.20-06, Clause 12.11) [0°C (32°F)]	0.35
Hardness (Shore D) (ASTM D2240-91) [25°C (77°F)].....	85

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PHYSICAL / MECHANICAL / ELECTRICAL PROPERTIES (cont.):

Impact [Joules (ft-lbf)] (CSA-Z245.20-06, Clause 12.12)	
[-5°C (23°F)]	4.00 (2.95)
[25°C (77°F)]	5.00 (3.69)
Water Absorption (%) (ASTM D570) (ISO-62)	
48 Hours, [25°C (77°F)]	0.24
48 Hours, [50°C (122°F)]	0.76

SAFETY: Read the Material Safety Data Sheets before use.

EFFECTIVE DATE: October 21, 2016

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