DESCRIPTION: SP-3888® is a range of surface coatings based on “State of the Art” epoxy chemistry. SP-3888® is similar to SP-2888® R.G. but has high temperature operating capability. The cathodic disbonding resistance of SP-3888® is excellent at temperatures up to 95°C (203°F). SP-3888® is available in Brush Grade and Spray Grade. SP-3888® is also available in Cartridges for coating repairs.

ADVANTAGES:
- 100% Solids - No VOCs.
- High build single coat application.
- Isocyanate free.
- Excellent resistance to high temperature cathodic disbonding at temperatures up to 95°C (203°F)
- Excellent adhesion to grit blasted steel surfaces, Fusion Bond Epoxy (FBE), liquid epoxy, and urethane coatings.

USES:
- Internal lining for pipelines.
- Exterior coating for pipelines in buried or immersed service.
- Coating of pipe, valves and fittings.
- Rehabilitation of existing pipelines.
- Slip bore and directional drilling applications.
- Girth weld coatings.
- Tank linings.

APPLICATION:
- Spray Grade: Graco Hydra-Cat (Tip Size: .019 - .031)
- Brush Grade: Brush or Roller
- Cartridge: Manual Dispenser

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

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SURFACE PREPARATION:

Steel Substrate:  
- Cleanliness : Near White  
- Standards : NACE 2, Sa 2½ (Swedish Scale, ISO 8501-1)  
  : SSPC SP-10 (The Society for Protective Coatings)  
- Profile : 62.5 microns minimum to 125 microns maximum  
  (2.5 mils to 5.0 mils)

FBE:  
- Profile : 6.25 microns (2.5 mils) minimum

MIXING RATIO:  
- Brush Grade or Spray Grade; By Volume: 3 Parts Base to 1 Part Hardener.  
- Cartridge; By Volume: 2 Parts Base to 1 Part Hardener.

HOSE BUNDLE:  
- Heated hose bundle consisting of 3/8” ID base and ¼” ID hardener line with ¼” solvent flush line outside of the bundle. Glycol heat trace or equivalent capable of 80°C (176°F)  
  * Insulated whip hoses not recommended for glycol heat trace*

TIP SIZE:  
.019 – .033

RECOMMENDED SPRAY PREHEAT TEMPERATURES IN DRUM / PAIL:  
BASE:  
70°C (158°F) to 80°C (176°F)  
HARDENER:  
20°C (68°F) to 30°C (86°F) (Ambient-typically not heated)

Pre-heating of the base material is required to balance the viscosity of base and hardener.

In cases of extreme weather conditions the recommended temperatures may change, please consult your SPC representative.
PRODUCT DATA SHEET

SP-3888®

RECOMMENDED FILM THICKNESS:

- **Pipelines:** 0.50 mm minimum to 1.25 mm (20 mils to 50 mils)
- **Directional & Mechanical Protection:** 1.00 mm minimum to 1.78 mm (40 mils to 70 mils).
- **Tank Lining:** 0.75 to 1.50 mm (30 to 60 mils).
  - 1.25 to 1.75 mm (50 to 70 mils) Tank bottom.
  - 1.8 to 2.4 m (6 to 8 ft.) Up tank wall.
- Depends upon application; consult with SPC Representative.

RE-COAT INTERVAL:

**Brush Grade:**

- @ 25°C (77°F) Maximum: 120 Minutes
- @ 80°C (176°F) Maximum: 3 Minutes

**Spray Grade:**

- @ 25°C (77°F) Maximum: 120 Minutes
- @ 80°C (176°F) Maximum: 2 Minutes

BACKFILLING:

Mechanical stress including backfilling or lowering in, shall not be applied to the coating until it has reached a Shore D Hardness ≥80.

COMPATIBILITY WITH OTHER ANTI CORROSION COATINGS:

SP-3888® is compatible with all SPC and fusion bonded epoxy (FBE) anti-corrosion coatings. For compatibility with other anti-corrosion coatings, please consult with SPC.
### HANDLING PROPERTIES:
- **Pot Life** [100 gm (3.5 oz) mass @ 25°C (77°F)] .......... Brush Grade 15 Minutes Spray Grade 2.25 Minutes
- **Gel time** [200 gm (7.0 oz) mass, Base 70°C (158°F), Hardener 25°C (77°F)] .................................................. Dry Hard Time 4.0 Hours Dry Hard Time 3.5 Hours
- **Dry Time (ASTM D1640)** [0.60 mm (25 mils) coating thickness @ 25°C (77°F)]
- **Touch Dry Time** ..............................................................
- **Ambient Temperature** ...................................................... -25°C to 100°C (-13°F to 212°F)
- **Substrate Temperature** ................................................. The acceptable substrate (metal surface) temperature range for the application of SP-3888® is 10°C (50°F) to 100°C (212°F). Preheating of the substrate is required if the surface to be coated is below 10°C (50°F). 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 5°C (41°F) and 40°C (104°F). Keep in a tightly sealed container when not in use. The Shelf Life of SP-3888® is a maximum of 24 months from the date of manufacture if the materials are in unopened containers.

### LIQUID PROPERTIES:
<table>
<thead>
<tr>
<th>Appearance .........................</th>
<th><strong>BASE</strong> Grey Viscous Liquid.</th>
<th><strong>HARDENER</strong> Light Amber Liquid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solids Content (%) ..................</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Specific Gravity (ASTM D1475) ....</td>
<td>1.60 ± 0.03</td>
<td>1.03 ± 0.03</td>
</tr>
<tr>
<td>Specific Gravity (ASTM D1475) ....</td>
<td></td>
<td>1.46 ± 0.03</td>
</tr>
<tr>
<td>Coverage (Theoretical) ............</td>
<td></td>
<td>39.0 m²/Litre/25 microns</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[1604 ft²/U.S. Gallon/mil]</td>
</tr>
</tbody>
</table>

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PHYSICAL / MECHANICAL / ELECTRICAL 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)] ...................... > 20 (> 3000)

- **Wet Adhesion (Hot Water Soak) (CSA-Z245.20-10, Clause 12.14, 120 Days)**
  [75°C ± 3°C (167°F ± 5°F)] ...................................................... Rating #1

- **Cathodic Disbonding Test [Average Radius (mm)]**
  [CSA-Z245.20-10, Clause 12.8, System 1A, 28 Days @ 65°C (149°F)] .......... 9-10

- **Cathodic Disbonding Test [Average Radius (mm)]**
  [CSA-Z245.20-10, Clause 12.8, System 1A, 28 Days @ 95°C (203°F)] ...... 10-11

- **Dielectric Strength (volt/10⁻³ in) (ASTM D149) ...................................... 400**

- **Dielectric Constant (60 cycles) (ASTM D150) ......................................... 4.2**

- **Hardness (Shore D) (ASTM D2240-91) [25°C (77°F)] .......................... 85**

- **Heat Resistance [°C (°F)] .............................................................. > 150 (> 302)**

- **Impact Strength [Joules (ft-lbf)] (CSA-Z245.20-10, Clause 12.12)**
  [-30°C (-22°F)] .............................................................................. 1.5 (1.11)

- **Salt Spray Resistance (h) (ASTM B117) ............................................... > 1000**

- **Volume Resistivity (ohm-cm) (ASTM D257) ........................................... 1.0 x 10¹⁴**

- **Water Vapour Permeability (perm-in) (ASTM D1434) ......................... < 0.003**

- **Water Absorption (% , 24h, r.t.) (ASTM D570) ....................................... 0.1**

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CHEMICAL RESISTANCE (ASTM G20) (90 Days immersion @ ambient temperatures):

- Ammonium Chloride, 10% solution ............... No change observed.
- Bio Diesel .................................................. No change observed.
- Calcium Chloride, 10% solution ..................... No change observed.
- Chromic Acid 5% solution ............................. No change observed.
- Diesel .......................................................... No change observed.
- Ethanol .......................................................... No change observed.
- Hydrochloric Acid, 5% solution ...................... No change observed.
- Mineral Oil .................................................... No change observed.
- Monoethylene Glycol ..................................... No change observed.
- Naphtha ......................................................... No change observed.
- Nitric Acid, 5% solution ................................. No change observed.
- Potassium Chloride, 10% solution ................... No change observed.
- Sodium Carbonate, 10% solution .................... No change observed.
- Sodium Chloride, 10% solution ....................... No change observed.
- Sodium Silicate solution ............................... No change observed.
- Sodium Hydroxide, 10% solution .................... No change observed.
- Sulphuric Acid, 5% solution ........................... No change observed.
- Zinc Sulphate, 10% solution ........................... No change observed.

SAFETY:  Read the Material Safety Data Sheets before use.

NOTE:  All epoxy coatings will change colour, lose gloss and chalk on exterior exposure. However, the protective properties of the material will not be affected.

REFER TO THE SP-3888® CURING TABLE (APPENDIX “A”).

EFFECTIVE DATE:  October 24, 2016   Rev. 2
# APPENDIX “A”

**SP-3888® CURING TABLE**

<table>
<thead>
<tr>
<th>°C</th>
<th>°F</th>
<th>Brush Grade</th>
<th>Spray Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90</td>
<td>194</td>
<td>2 Minutes</td>
<td>1.5 Minutes</td>
</tr>
<tr>
<td>80</td>
<td>176</td>
<td>3 Minutes</td>
<td>2 Minutes</td>
</tr>
<tr>
<td>70</td>
<td>158</td>
<td>5 Minutes</td>
<td>3 Minutes</td>
</tr>
<tr>
<td>60</td>
<td>140</td>
<td>15 Minutes</td>
<td>9 Minutes</td>
</tr>
<tr>
<td>50</td>
<td>122</td>
<td>37 Minutes</td>
<td>16 Minutes</td>
</tr>
<tr>
<td>40</td>
<td>104</td>
<td>1 Hour 20 Minutes</td>
<td>38 Minutes</td>
</tr>
<tr>
<td>30</td>
<td>86</td>
<td>1 Hour 45 Minutes</td>
<td>1 Hour 40 Minutes</td>
</tr>
<tr>
<td>25</td>
<td>77</td>
<td>4 Hours</td>
<td>3 Hour 30 Minutes</td>
</tr>
<tr>
<td>20</td>
<td>68</td>
<td>5 Hours 40 Minutes</td>
<td>4 Hours 50 Minutes</td>
</tr>
<tr>
<td>10</td>
<td>50</td>
<td>16 Hours</td>
<td>14 Hours</td>
</tr>
</tbody>
</table>

Substrate: 12 mm (0.5 inch) Thick Steel Panels

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

Spray Grade Material Temperature: Base: 70°C (158°F)
Hardener: 25°C (77°F)

Dry Film Thickness: 0.50 mm (20 mils) DFT 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.

Effective Date: August 31, 2015  Rev. 2