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Effective Date: March 19, 2014

## **SP-2888<sup>®</sup> R.G. SPRAYABLE CARTRIDGE APPLICATION SPECIFICATION STEEL SUBSTRATE**

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### **I. GENERAL**

- 1.1 SP-2888<sup>®</sup> R.G. Sprayable Cartridge coating is a 100% solids, epoxy-urethane manufactured and marketed by **Specialty Polymer Coatings, Inc. (“SPC”)**, #101 – 20529 – 62nd Avenue, Langley, B.C., Canada, V3A 8R4, Telephone: (604) 514-9711, Fax: (604) 514-9722.
- 1.2 SP-2888<sup>®</sup> R.G. Sprayable Cartridge coating is to be application by SPC approved applicators.
- 1.3 This specification is applicable to the use of SP-2888<sup>®</sup> R.G. Sprayable Cartridge coating with a straight static mixer and a pneumatic dispenser.
- 1.4 Mixing Ratio: 2 Parts Base to 1 Part Hardener (pre-measured) by volume.
- 1.5 Colour Before Mixing: Base: White.  
Hardener: Blue.
- 1.6 Mixed Colour: Light Blue.

### **II. PACKAGING**

- 2.1 SP-2888<sup>®</sup> R.G. Sprayable Cartridge. 0.900 Litre consisting of 600 ml Base and 300 ml Hardener.
- 2.2 Pneumatic Dispenser.
- 2.3 Straight Static Mixer.



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### **III. EQUIPMENT**

- 3.1 2 x 1,000 watt 12 volt inverter units (cigarette lighter plug in) located on trucks that are onsite with the coating crew.
- 3.2 2 x 750 - 1000 watt microwave heating units.
- 3.3 2 x Infrared Thermometer Heat-indicating Guns.
- 3.4 0.900 Litre SP-2888<sup>®</sup> R.G. Sprayable Cartridges.
- 3.5 Pneumatic Dispenser.
- 3.6 1 x static mixer per cartridge ordered. We highly recommend ordering 2 mixers per cartridge to utilize partial cartridges.
- 3.7 Air supply requirements are 50 CFM per Pneumatic Dispenser, with delivery pressure regulated to maximum of 45 PSI per Pneumatic Dispenser.

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### IV. PROCEDURE TO PREPARE CARTIDGE

- 4.1 Remove the black retaining cap to separate the SP-2888<sup>®</sup> R.G. Sprayable Cartridge Base (white material) from the SP-2888<sup>®</sup> R.G. Sprayable Cartridge Hardener (blue material). (PHOTOGRAPH #1).



**PHOTOGRAPH #1**

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### IV. PROCEDURE TO PREPARE CARTIDGE (cont.)

- 4.2 Place the SP-2888<sup>®</sup> R.G. Sprayable Cartridge Base in the microwave and initially heat for three (3) minutes.
- 4.3 Remove the SP-2888<sup>®</sup> R.G. Sprayable Cartridge Base from the microwave and using the Infrared Thermometer Heat-indicating gun, scan all sides of the cartridge. Temperature readings should range from 57°C (135°F) at the lowest temperature to 76.5°C (170°F) at the highest temperature. This is the target application temperature window [57°C (135°F) minimum to 77°C (170°F) maximum] for SP-2888<sup>®</sup> R.G. Sprayable Cartridge Base. (PHOTOGRAPH #2).



**PHOTOGRAPH #2**



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### IV. PROCEDURE TO PREPARE CARTIDGE (cont.)

- 4.4 If further preheating is required, rotate the SP-2888<sup>®</sup> R.G. Sprayable Cartridge Base 180 degrees and place back in microwave (if the cartridge label was up on the initial heating procedure place the label down on the subsequent heating). Once this SP-2888<sup>®</sup> R.G. Sprayable Cartridge Base has achieved the target application temperature window, set it aside and begin preheating the SP-2888<sup>®</sup> R.G. Sprayable Cartridge Hardener as per 5.5.
- 4.5 Place the SP-2888<sup>®</sup> R.G. Sprayable Cartridge Hardener in the microwave and heat for one and a half (1.5) to three (3) minutes. Remove the SP-2888<sup>®</sup> R.G. Sprayable Cartridge Hardener from the microwave and using the Infrared Thermometer Heat-indicating Gun, scan all sides of the cartridge. Temperature readings should range from 43°C (110°F) at the lowest temperature to 54.5°C (130°F) at the highest temperature. This is the target application temperature window [43°C (110°F) minimum to 54°C (130°F) maximum] for SP-2888<sup>®</sup> R.G. Sprayable Cartridge Hardener.
- 4.6 If further preheating is required, rotate the SP-2888<sup>®</sup> R.G. Sprayable Cartridge Hardener 180 degrees and place back in microwave (if the cartridge label was up on the initial heating procedure, place the label down on the subsequent heating). Once this SP-2888<sup>®</sup> R.G. Sprayable Cartridge Hardener has achieved the target application temperature window, rejoin SP-2888<sup>®</sup> R.G. Sprayable Cartridge Base and SP-2888<sup>®</sup> R.G. Sprayable Cartridge Hardener.



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### V. APPLICATION

- 5.1 Pick up the Pneumatic Dispenser. (PHOTOGRAPH #3). Put the Pneumatic Dispenser into retraction mode and pull and hold the trigger (this will open the plungers).



**PHOTOGRAPH #3**



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### V. APPLICATION (cont.)

- 5.2 Insert the pre-heated re-joined SP-2888<sup>®</sup> R.G. Sprayable Cartridge Base and SP-2888<sup>®</sup> R.G. Sprayable Cartridge Hardener with the static mixer attached into the Pneumatic Dispenser.
- 5.3 With the Pneumatic Dispenser still in retraction mode, release the trigger on the Pneumatic Dispenser. This will lock the cartridge into place.
- 5.4 Turn the dispense rate valve to zero, which is counterclockwise.
- 5.5 Change the brass pinion valve to forward motion, or the dispense mode.
- 5.6 Initially trigger the Pneumatic Dispenser off of the pipe until an adequate spray fan is achieved. There will be a distinctive hissing noise from the static mixer which will indicate adequate atomization. Adjust the dispense rate accordingly
- 5.7 Once the cartridges have an adequate fan (phased in) begin applying material to the pipe surface.

### VI. OBSERVATIONS AND SUGGESTIONS

- 6.1 Considering the high delivery capacity of this system, it is easy to deliver more product than can be diffused from the spray tip. Once you have achieved atomization of this system, delivery to the pipe is a typical 50% overlap per pass, starting on the bottom of the pipe progressing to the top.
- 6.2 In extreme temperatures, the cartridges can become cold at the end of the dispense cycle. Simply recap this cartridge and retain it for use on the next opportunity.
- 6.3 During dispensing, should the product flow cease, do not increase the dispense rate. Most likely the static mixer is hardened, simply remove the mixer and replace it with a new one.



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### **VII. SAFETY PRECAUTIONS**

- 7.1 The contractor will provide safe and secure access to work areas.
- 7.2 SP-2888<sup>®</sup> R.G. Sprayable Cartridge coating is **HARMFUL IF ABSORBED THROUGH SKIN, INHALED OR SWALLOWED**. It is a skin and eye irritant. Personal protective equipment is required. Refer to the **Material Safety Data Sheets**.
  - 7.2.1 Chemical resistant gloves with a long cuff that will overlap the clothing sleeves should be worn when handling this product. The glove / clothing overlaps should be sealed by tape. Check with the glove manufacturer to determine the proper glove type.
  - 7.2.2 Wear an appropriate, properly fitted vapour respirator (NIOSH / OSHA approved) during application where vapour / mist are likely to be encountered, e.g. confined spaces and during winter construction or when the substrate is preheated. For outdoor application and areas with adequate ventilation, the use of a respirator is normally not required. Follow the respirator manufacturer's recommendations. Wear a dust respirator for any activity such as sanding or grinding of cured coating.
  - 7.2.3 Wear splash proof chemical safety goggles and / or face shield.
  - 7.2.4 Wear impervious boots.
  - 7.2.5 Long-sleeved clothing is to be worn over regular clothing to cover all exposed areas of arms, legs or torso during mixing and application of the coating. Breathable clothing, such as cotton or disposable coveralls, is recommended.
  - 7.2.6 Emergency eyewash and a shower should be in close proximity, where possible. A barrier cream may be used, in conjunction with the stated protective measures, as an additional safeguard against skin contact.
- 7.3 Keep the containers closed when not in use. In case of spillage, absorb with inert material and dispose of in accordance with Federal, Provincial, and Municipal regulations in Canada and Federal, State, and County regulations in the United States of America.
- 7.4 No open flames, smoking or welding will be allowed in the immediate vicinity during the coating application





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### **VII. SAFETY PRECAUTIONS (cont.)**

- 7.5 All personnel on the application crew shall be informed of regulations regarding smoking, auto traffic restrictions, the meaning of warning bells, horns and whistles, fire warnings and restricted areas. Members of the coating crew shall maintain good personal hygiene and wash thoroughly after exposure to the coating application, particularly before eating or going on breaks.

### **VIII. MATERIALS**

- 8.1 SP-2888<sup>®</sup> R.G. Sprayable Cartridge coating containers must be sealed prior to use.
- 8.2 **NO** amount of SP-2888<sup>®</sup> R.G. Sprayable Cartridge coating shall be given, sold or exchanged without the express written consent of SPC.
- 8.3 The acceptable shipping and storage temperature range for SP-2888<sup>®</sup> R.G. Sprayable Cartridge coating is between 5°C (41°F) to 40°C (104°F).
- 8.4 Store SP-2888<sup>®</sup> R.G. Sprayable Cartridge coating in a cool, dry, well-ventilated area. Keep the container lids sealed when not in use. The Shelf Life of SP-2888<sup>®</sup> R.G. Sprayable Cartridge coating is a maximum of 24 months from the date of manufacture if the materials are in unopened containers.

### **IX. SUBSTRATE TYPES**

- 9.1 This specification is applicable to standard steels.
- 9.2 Exotic metals, stainless steel or other special types of steel or alloys may require different consideration as to surface preparation and SPC formulations. Notification of the use of such metals must be made to SPC.



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### **X. INSURANCE**

- 10.1 The contractor will provide all necessary insurance to protect itself and its employees during the application of SP-2888® R.G. Sprayable Cartridge coating.
- 10.2 SPC will provide all necessary coverage to protect SPC employees on site.

### **XI. DISPOSAL**

- 11.1 Dispose of empty Base and Hardener containers according to Federal, Provincial and Municipal regulations in Canada and Federal, State and County regulations in the United States of America.
- 11.2 Allow all mixed material to complete gel prior to disposal.

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