



CORPORATE HEAD OFFICE  
Specialty Polymer Coatings  
#101, 20529 – 62<sup>nd</sup> Avenue, Langley, BC, CANADA V3A 8R4  
Tel: (604) 514-9711 • Fax: (604) 514-9722

U.S.A. HEAD OFFICE  
Specialty Polymer Coating USA, Inc  
22503 FM521, Angleton, Texas, 77515, USA  
Tel: (281) 595-3530 • Fax: (281) 595-3717

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**SPECIALTY POLYMER COATINGS, INC. (SPC)**  
**SP-2888<sup>®</sup> R.G. CARTRIDGE APPLICATION SPECIFICATION**  
**ACCELERATED CURE FOR HOLIDAY REPAIR**

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**I. GENERAL**

- 1.1 SP-2888<sup>®</sup> R.G. Cartridge coating is a 100% solids, epoxy-urethane manufactured and marketed by Specialty Polymer Coatings, Inc. (“SPC”), #101 – 20529 – 62nd Avenue, Langley, BC, Canada, V3A 8R4, Telephone: (604) 514-9711, Fax: (604) 514-9722, and applied by SPC approved applicators.
- 1.2 This specification outlines the procedures and methods for using Specialty Polymer Coatings, Inc.’s SP-2888<sup>®</sup> R.G. Cartridge as an Accelerated Cure for Holiday Repair. The procedures may be used for either pinhole holidays or mechanical damage with exposed steel not exceeding 323 cm<sup>2</sup> (50 in<sup>2</sup>).

**II. EQUIPMENT**

- 2.1 Preheating and post-heating may be carried out with a heat gun. The model used to test this procedure was a two-temperature 110 V AC heat gun set at 538°C (1,000°F). Most home repair warehouses carry this equipment. It runs off of 110V AC.

**III. PROCEDURES**

- 3.1 After detecting a holiday, the holiday may be shielded from the spring with a dielectric material to determine if there are other holidays at that circumference of pipe. Mark all holidays for repair.
- 3.2 Prepare the surface for coating:
  - Pinhole holidays: Abrade the area around the holiday for 25 mm (1”) with 80 grit non-metallic sandpaper until the gloss is removed. Then remove the remaining dust with a clean, dry cloth or clean compressed air.
  - Holidays / damage with exposed steel: Abrasive blast the bare steel to NACE #2 Near White Metal. Feather the blast onto the parent coating for at least 50 mm (2”) around the holiday. Always angle the blast nozzle from the parent coating onto the bare steel when roughening the parent coating.

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### **III. PROCEDURES (cont.)**

- 3.3 Preheat the area: With a handheld heat gun, heat the area for at least 75 mm (3”) around the holiday to be coated to ~ 85°C (185°F). Hold the end of the gun approximately 50 mm (2”) from the substrate. Move the gun briskly back and forth over the area. Measure the temperature with an infrared non-contact thermometer. It should take approximately two minutes to reach and stay at 85°C (185°F). A slight darkening of the parent coating is acceptable but any charred coating must be removed.
- 3.4 Coat the areas to be repaired with an SP-2888<sup>®</sup> R.G. Cartridge using one of the following two methods:
1. With the static mixer: The first few pumps may not be completely mixed; eject the first few pumps and dispose of them as solid waste after they solidify. Pump out enough material to coat the abraded area directly onto the substrate. Spread out the coating to a uniform thickness with a spatula or paintbrush to a DFT of 0.60 mm (25 mils).
  2. Without the static mixer: SP-2888<sup>®</sup> R.G. will harden in the static mixer in twenty minutes at 25°C (77°F). If more than 20 minutes will elapse between repairs, either replace the mixer or mix by hand. To mix by hand, eject the required amount of coating material from the cartridge onto a clean tray or cup and hand mix the product with a stir stick until the coating colour becomes uniform with no streaks. Apply the coating to 0.60 mm (25 mils) DFT on the area to be repaired using a spatula or paintbrush.
- 3.5 Post-heating: Using a heat gun, post-heat the coating to a Shore D Hardness of 65. Hold the end of the gun at least 50 mm (2”) from the substrate so that the repair area does not bubble or char. Heating times will vary depending upon the type of heat gun used, the existing substrate, and ambient temperatures. Allow the coating to cool for approximately one minute.
- 3.6 Holiday inspection:
- After the coating has reached a Shore D 65 Hardness and cooled, the coating should reach a “touch dry” condition (as per ASTM D-1640). While this is not adequate for backfill, a spring-type holiday detector may be used over the patched area. If the spring leaves more than surface marks on the patched area, repair the area.
  - If the entire circumference has been tested by shielding the holiday and retesting with a spring holiday detector prior to patching, then a conductive rubber probe may be used for holiday detection of the repair. While the conductive rubber probe must be in physical contact with the holiday repair, pressure does not need to be exerted. Therefore, once the SP-2888<sup>®</sup> R.G. has reached a Shore D 65 Hardness (coating where material will not adhere to the conductive rubber probe), holiday detection may proceed.

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### **III. PROCEDURES (cont.)**

- 3.7 SP-2888<sup>®</sup> R.G. must be cured to a Shore D Hardness of 80 before backfilling may commence. Also, in order to accelerate the progress, one gun could be used to preheat and a second gun used for the post-cure. The person doing the post-cure can apply the patch material and then complete the post-cure which should result in a cycle time of approximately 6 minutes depending upon the beginning substrate temperature.

### **IV. SAFETY PRECAUTIONS**

- 4.1 The contractor will provide safe and secure scaffolding for ready access to work areas.
- 4.2 SP-2888<sup>®</sup> R.G. 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.
- 4.2.1 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.
- 4.2.2 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. A dust respirator should be worn for any activity such as sanding or grinding of cured coating.
- 4.2.3 Wear splash proof chemical safety goggles and / or face shield.
- 4.2.4 Wear impervious boots.
- 4.2.5 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.
- 4.2.6 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.

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

- 4.3 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.
- 4.4 No open flames, smoking or welding will be allowed in the immediate vicinity during the coating application.
- 4.5 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, wash thoroughly after exposure to the coating application, particularly before eating or going on breaks.

### **V. MATERIALS**

- 5.1 SP-2888<sup>®</sup> R.G. Cartridges must be sealed prior to use.
- 5.2 **NO** amount of SP-2888<sup>®</sup> R.G. Cartridges shall be given, sold or exchanged without express written permission from SPC.
- 5.3 The acceptable shipping and storage temperature range for SP-2888<sup>®</sup> R.G. Cartridges is between 5°C (41°F) to 40°C (104°F).
- 5.4 Store SP-2888<sup>®</sup> R.G. Cartridges in a cool, dry, well-ventilated area. Keep the lids sealed. The Shelf Life is a maximum of 24 months in unopened containers.

### **VI. CLEANING**

- 6.1 If cleaning is necessary, the following materials can be used:
- Use SP-100 Equipment Wash to clean uncured material on spatulas.
  - Use SP-110 Tool Cleaner to clean cured material on objects such as putty knives or mixing blades.
  - Brushes must be disposed of after use. **DO NOT** attempt to clean and re-use.

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**VII. INSURANCE**

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

**VIII. DISPOSAL**

- 8.1 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. Allow all mixed material to complete gel prior to disposal.

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