

Application Guide

Spray Application



Powercrete R-95 is a 100% Solids Epoxy used for corrosion and abrasion protection. This coating is applied over clean, bare steel and adjacent plant applied or mainline coatings. The application is fast and easy. Simply follow these guidelines.

1.0 Scope

- 1.1 This application guide details the spray application for coating the surface of bare steel pipe or over plant applied or mainline coatings with Powercrete R-95, a new generation of protective coating material.
- 1.2 Contractor shall furnish all labor, supervision, materials, equipment and related hardware required for completing an acceptable application.
- 1.3 Coating materials shall be plainly and permanently marked, stored, and applied in accordance with the manufacturer's specification as directed by the Company's authorized representative.

2.0 Definitions

- 2.1 Company - The acceptor of the finished Powercrete R-95 coated pipe, its employees, contracted inspector, or other authorized personnel.
- 2.2 Coating Applicator - The company responsible for the application of Powercrete R-95 coating.
- 2.3 Manufacturer - The supplier/manufacturer of the Powercrete R-95 material / product.

3.0 Surface Preparation

- 3.1 The surface to be coated shall be cleaned of all coatings and free of all contaminates. Following cleaning, the surface of the steel shall be abrasive-blasted (sand or other suitable material). The pipe surface shall not be burnished. Steel surface to be coated shall be cleaned to near-white, ISO-8501-1, NACE No.2, SA-2 1/2, SSPS-SP-10 or better. Surface anchor profile to be 2.5 - 4 mils (63.5 - 101.6 microns) with sharp angularity, creating peaks & valleys.
- 3.2 Before applying the Powercrete R-95 coating, the surface shall be subject to inspection for appropriate surface preparation.
- 3.3 The surface of the existing coating that will be overlapped, if present, shall be tapered, cleaned and abraded. Sweep blast cleaning (brush-off blasting) is also recommended..

4.0 Coating Application

- 4.1 Insure that the surface is clean of grease, oil, salts and other contaminates. If necessary, use Acetone, MEK or other suitable solvent. Solvent used for cleaning should be without moisture/water contents and should not leave its residue on the surface. Perform cleaning when surface is 3°C (5°F) above dew point, with no surface moisture present. While not always necessary, preheating can be useful just prior to application. To eliminate moisture, preheat the area to approx. 40°C (104°F). To accelerate curing, preheat the area to approx. 90°C (194°F).
- 4.2 The dry, clean surface shall be coated within 4 hours after blast cleaned.

4.3 Spray Application

- 4.3.1 The Powercrete R-95 components shall be adequately mixed using a shut off valve manifold and 4 x 1/8" mixers connected by "L" bolts or equivalent, with a short whip hose and a 1-M airless gun.
- 4.3.2 Powercrete R-95 shall be spray applied to the abraded, dried, cleaned surface, using adequate atomization.
- 4.3.3 Powercrete R-95 shall be sprayed over the entire bare metal surface to a thin layer of 4-6 mils (101.6 - 152.4 microns) for better penetration, then shall be built up to the desired thickness.
- 4.3.4 Existing coating shall be overlapped at least 2.54 cm (1").
- 4.3.5 Coated surface shall not be touched for at least 4 hours if ambient temperature is above 21°C (70°F), 5 hours at 16-21°C (60-70°F). This curing time can be reduced by applying heat with a heat gun or shrink sleeve torch. Do not raise the temperature in excess of 71°C (160°F). If torch or heat gun is used, keep it moving to avoid scorching the coating.
- 4.3.6 The wet coating shall not be contaminated with particles such as blowing sand, backfill, insects or other foreign materials.
- 4.3.7 Under no circumstances shall the pipe be installed before the Powercrete R-95 coating has reached a minimum Shore D hardness of 75.
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5.0 Inspection

5.1 All work done shall be subject to inspection and acceptance by the Company's inspector.

5.2 The Coating Applicator's quality control inspector shall advise the Applicator's foreman when conditions exist which adversely affect the coating operation with respect to cleaning, application, or material performance, so that immediate corrective measures can be taken.

5.3 Holiday checks shall be made using a Hot Spark Detector. The total voltage used for holiday checks will be 125 volts per mil and holidays found shall be patched as per Section 6 of this guide. The patched holidays shall be retested.

5.4 Coating thickness checks shall be made at an ambient temperature with a magnetic pull-off film thickness gauge (or other) that has been calibrated within the previous 24 hours, or immediately if mishandled, using a U.S. Bureau of Standards certified coating calibration standard. The thickness of the calibration standard shall be at the upper and lower end of the specified thickness range. Thickness measurements shall be made in accordance with SSPC-PA2, Section 2. The thickness measurements shall be taken along the length of each joint of Powercrete R-95 coated pipe at the 12 o'clock and 6 o'clock positions.

5.5 Coating hardness checks shall be made at an ambient temperature with a Shore D Durometer (ASTM D2240), lab calibrated within the previous sixty (60) days and verified daily, in good working condition and with no obvious damage. The checks shall be made at the 12 o'clock and 6 o'clock positions on the surface.

6.0 Repairs

6.1 All damage detected by visual and electrical inspection shall be repaired by the Applicator. Company approved coating mixtures shall be used for patching holidays and damaged coating.

6.2 Any areas requiring patching shall be cleaned of coating by hand or power tools. Remove oil, grease, loosely adhering particles or any other contaminants. Steel surface area should be dry, cleaned, and patched with Powercrete R-95. (see manual/kit application guide)

6.3 For small repairs to scratches or other holidays, Powercrete R-95 cartridge applicator kit may be used. Assemble and load Powercrete R-95 Part-A and Part-B cartridge into gun. Trim end of mixer and attach to the nozzle. Dispense small amount of Powercrete R-95 onto repair area. And apply it to a desired thickness.

6.4 Patches shall overlap the surrounding undamaged coating by a minimum of 19 mm (3/4").

6.5 Repairs shall be subject to reinspection at the discretion of the Company inspector.

6.6 Areas not meeting the hardness requirement shall be removed using a method that will not damage the pipe. And then after suitable cleaning, Powercrete R-95 is to be re-applied.

Storage

For optimum performance, store Powercrete® Epoxy products in a dry, well-ventilated area. Maintain products in original packaging and sealed until just before use. Avoid exposure to direct sunlight, rain, snow, dust or other adverse environmental conditions or contaminants.

NOTE: Avoid prolonged storage at temperatures above 40°C (104°F) or below 5°C (40°F).

Safety Guidelines

Important: Read the MSDS prior to using the products. Product installation should be done in well-ventilated area and in accordance with local health and safety regulations. These application guidelines are intended as a guide for standard products. Consult your Berry Plastics representative for specific projects or unique applications

Berry Plastics warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the technical data sheet when used in compliance with Berry Plastics written instructions. Since many installation factors are beyond the control of Berry Plastics, the user shall determine the suitability of the products for the intended use and assume all risks and liabilities in connection herewith. Berry Plastics liability is stated in the standard terms and conditions of sale. Berry Plastics makes no other warranty either expressed or implied. All information contained in this technical data sheet is to be used as a guide and is subject to change without notice. This technical data sheet supersedes all previous data sheets on this product.

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