NOTE TO SPECIFIER: Be sure to obtain the latest version of this Guide Specification.

This Guide Specification is not a completed document ready for use. It must be edited (i.e., deleting, adding, or modifying text) as required to suit project requirements.

The design professional and the contracting parties of the Contract Documents are responsible for the accuracy of issued project specifications, including use of this SCPTM Guide Specification.

Contact SCPTM for instructions for other applications not included in this specification.

SCPTM (SPRAY-LOCK CONCRETE PROTECTIONTM) SHALL NOT BE LIABLE FOR DAMAGES ARISING OUT OF THE USE OF THIS GUIDE

CSI 3-PART SHORT-FORM GUIDE SPECIFICATION

EDIT TO SUIT PROJECT REQUIREMENTS

**SECTION**

**SCPTM SPRAY-APPLIED COLLOIDAL SILICA CONCRETE TREATMENTS**

1. GENERAL
   * + 1. SUMMARY
          1. Section includes SCPTM spray-applied, penetrating, colloidal silica concrete treatments and substrate protection, applied after finishing for new and existing concrete for use in areas where the concrete member is exposed to migration and diffusion of chlorides from saltwater, splash zones, potential liquid contaminants under hydrostatic pressure, regular and consistent exposure to detrimental conditions, or other similar severe sources of attack mechanisms.
       2. PRE-POUR/ PREINSTALLATION MEETINGS
          1. Pre-pour/ preinstallation meeting: SCPTM personnel or approved representative should be in attendance, in-person or by phone, at the pre-pour/ preinstallation meeting for concrete placement to discuss the requirements for concrete member preparation and product application.
       3. SUBMITTALS
          1. Product Data: For each type of product.
       4. QUALITY ASSURANCE
          1. Material Requirements: Concrete mixes need to be Portland cement based and designed in accordance with ACI and ASTM requirements.
          2. Manufacturer Qualifications: ISO 9001 Certified Manufacturer with a minimum 5 years' experience and capable of providing field service representation.
       5. DELIVERY, STORAGE, AND HANDLING
          1. Delivery, storage, and handling shall be according to the manufacturer’s written recommendations, industry guidelines, and/or Division 01 requirements whichever is more stringent.
       6. FIELD CONDITIONS
          1. Environmental Requirements per manufacturer’s written recommendations, Division 01, and as follows:

Allow surfaces to attain a temperature of 35 deg F (1.7 deg C) and rising before proceeding with product application.

Product should not be allowed to freeze.

Protect application surfaces during periods of exposure to high winds.

Surfaces to be treated should not be frozen or have frost on them. In addition, standing water should be removed prior to treatment.

Surfaces over 90 deg F and Direct Sunlight Conditions: Spray a fine mist of water on the surface before the application of SCPTM treatment to help alleviate premature chemical reaction and/or drying from taking place prior to achieving maximum penetration.

1. PRODUCTS
   * + 1. PERFORMANCE REQUIREMENTS
          1. SCPTM Spray-Applied Penetrating Colloidal Silica Concrete Treatment Performance:

ASTM C 1556 Standard Test Method for Determining the Apparent Chloride Diffusion Coefficient of Cementitious Mixtures by Bulk Diffusion: Treated, normal strength concrete typically provides at least a 30% reduction of chloride diffusion from untreated concrete.

NT 492 nordtest method Concrete, Mortar and Cement-Based Repair Materials: Chloride Migration Coefficient From Non-Steady-State Migration Experiments: Treated, normal strength concrete typically provides at least a 20% reduction of chloride migration from untreated concrete.

EN 12390-8 Testing hardened concrete: Depth of penetration of water under pressure: Treated, normal strength concrete a typically provides at least a 70% reduction of penetration from untreated concrete.

ASTM C 1803 Standard Guide for Abrasion Resistance of Mortar Surfaces Using a Rotary Platform Abraser: Treated, normal strength concrete typically provides at least a 40% reduction in abrasion loss from untreated concrete.

NOTE TO SPECIFIER: Retain or revise paragraph and subparagraphs below for USGBC LEED v4 requirements.

* + - * 1. Low-Emitting Materials:

General Emissions Evaluation: Building products shall be tested and determined compliant according to California Department of Public Health (CDPH) Standard Method v1.1–2010, using the applicable exposure scenario.

* + - 1. MANUFACTURERS
         1. Manufacturers: Subject to compliance with requirements, provide spray-applied products by Spray-Lock Concrete Protection, LLC, 5959 Shallowford Road, Suite 405, Chattanooga, TN 37421; (office) 423.305.6151 / (fax) 423.305.6150; [www.concreteprotection.com](http://www.spraylockcp.com/)
         2. SCPTM penetrating colloidal silica concrete treatments shall conform to the information provided in the most current product data sheet supplied by Spray-Lock Concrete Protection.
      2. ACCESSORIES
         1. Large Surface Areas and/or Volumes: Low-pressure, high-volume sprayer less than 100 psi (0.69 MPa), or medium-pressure airless sprayer less than 500 psi (3.4 MPa). Please refer to the manufacturers Product Data Sheet for more information on sprayer requirements and additional equipment.
         2. Small to Medium Surface Areas and/or Volumes: Pump or backpack sprayer for areas under 1000 sq ft (9.3 sq m), or sprayers indicated for large surface areas above.

1. EXECUTION
   * + 1. PREPARATION
          1. Prepare according to SCPTM’s written instructions.
       2. APPLICATION
          1. Apply using the SCPTM’s written instructions.

END OF SECTION