

C.S.I. PRODUCT GUIDE SPECIFICATIONS

January, 2010

Product Guide Specification

Specifier Notes: This product guide specification is written according to the **Construction Specifications Institute (CSI) 3-Part Format**, including *MasterFormat*, *SectionFormat*, and *PageFormat*, contained in *The Project Resource Manual—CSI Manual of Practice*.

The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the Drawings. Delete all "Specifier Notes" when editing this section.

Section numbers are from *MasterFormat 1995 Edition*, with numbers from *MasterFormat 2004 Edition* in parentheses. Delete version not required.

SECTION 09965 (09 96 69)

FLEXIBLE CONCRETE WATERPROOF COATING

Specifier Notes: This section covers GrailCoat™ flexible concrete waterproof coating. Consult the GrailCoat Company, LLC for assistance in editing this section for the specific application.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Flexible concrete waterproof coating.

1.2 RELATED SECTIONS

Specifier Notes: List by section number and title other sections with work directly related to this section.

- A. Section .

1.3 REFERENCES



GrailCoat WorldWide, LLC

For more information please contact us at:
Phone: 888-999-1907; Fax: 407-749-0705
www.grailcoat.com ; Inquiry@grailcoat.com

Specifier Notes: List standards referenced in this section, complete with designations and titles. This article does not require compliance with standards, but is merely a listing of those used.

- A. ASTM B 117 - Standard Practice for Operating Salt Spray (Fog) Apparatus.
- B. ASTM D 696 - Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30 Degrees C and 30 Degrees C With a Vitreous Silica Dilatometer.
- C. ASTM D 822 - Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings.
- D. ASTM D 1388 - Standard Test Method for Stiffness of Fabrics.
- E. ASTM D 1777 - Standard Test Method for Thickness of Textile Materials.
- F. ASTM D 3786 - Standard Test Method for Hydraulic Bursting Strength of Textile Fabrics-Diaphragm Bursting Strength Tester Method.
- G. ASTM D 4585 - Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation.
- H. ASTM D 4632 - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
- I. ASTM D 5261 - Standard Test Method for Measuring Mass per Unit Area of Geotextiles.
- J. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- K. ASTM G 23 - Practice for Operating Light-Exposure Apparatus (Carbon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials.
- L. ASTM G 154 - Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials.
- M. SSPC-SP 3 - Power Tool Cleaning.
- N. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials.

1.4 SUBMITTALS

- A. Comply with Section 01330 (01 33 00) - Submittal Procedures.
- B. Product Data: Submit manufacturer's product data, including surface preparation, mixing, and application instructions.
- C. Samples: Submit manufacturer's samples for review of color and texture.
- D. Applicator's Project References: Submit list of successfully completed projects, including project name and location, name of architect, and type and quantity of concrete waterproof coatings applied.



1.5 QUALITY ASSURANCE

A. Applicator's Qualifications:

1. Successful experience in application of similar concrete waterproof coatings.
2. Employ persons trained for application of concrete waterproof coatings.

Specifier Notes: Edit mock-ups as required for the project.

B. Mock-ups:

1. Comply with Section 01450 (01 43 39) - Mock-up Requirements.
2. Apply a minimum of 25 square feet of specified concrete waterproof coating on each type of surface.
3. After approval by Architect, mock-ups shall serve as standard for the Work.
4. Leave approved mock-ups in place as part of completed Work.

Specifier Notes: Edit pre-application meeting as required for the project.

- ### C. Pre-application Meeting: Convene a pre-application meeting before start of application of concrete waterproof coating. Require attendance of parties directly affecting work of this section, including Contractor, Architect, and applicator. Review surface preparation, mixing, application, adjusting, cleaning, protection, and coordination with other work.

1.6 DELIVERY, STORAGE, AND HANDLING

- ### A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Storage:

1. Store materials in clean, dry area indoors in accordance with manufacturer's instructions.
2. Store materials out of direct sunlight.
3. Store materials between 50 and 90 degrees F.
4. Keep containers sealed until ready for use.

- ### C. Handling: Protect materials during handling and application to prevent damage or contamination.

1.7 ENVIRONMENTAL REQUIREMENTS

A. Do not apply concrete waterproof coating when:

1. Air, surface, or material temperatures are below 50 degrees F or above 100 degrees F.
2. Wide temperature variations could:
 - a. Cause condensation to form on freshly coated surfaces.
 - b. Adversely affect hydration or curing of coating.
3. There has been rain 48 hours before start of application or if rain is predicted within 24 hours after completion of application.
4. Relative humidity is above 80 percent for a 12-hour period immediately before, during, or immediately after application.



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PART 2 PRODUCTS

2.1 MANUFACTURER

A. GrailCoat WorldWide, LLC, 784 S. Pennsylvania Ave., Winter Park, Florida 32789.
Phone (407) 619-6442. Fax (407) 749-0705. Website www.grailcoat.com. E-mail: inquiry@grailcoat.com

2.2 FLEXIBLE CONCRETE WATERPROOF COATING

- A. Flexible Concrete Waterproof Coating: GrailCoat.
1. Fire Rating, ASTM E 84 and UL 723: Class B.

Specifier Notes: Specify the required texture. Consult GrailCoat WorldWide, LLC, for description of the various textures.

2. Texture: [Light knockdown] [Heavy knockdown] [Basic trowel] [Medium spatter] [Curtain] [Brush stipple] [Skip trowel] [Sand finish] [_____].

Specifier Notes: Specify the required color. Consult GrailCoat WorldWide, LLC for availability of custom colors.

3. Color: [Adobe Rose] [Bright White] [Crystal White] [Diamond Blue] [Earth Green] [Gold] [Gray] [Marble Tan] [Mist Blue] [Mist Green] [Natural Stone] [Portobello] [River Tan] [Sandalwood] [Slate Green] [Solid Tan] [Storm Gray] [Strawberry Mist] [Terra Cotta] [Wet Sand] [White] [_____].

Specifier Notes: GrailCoat can be applied to a number of different substrates as a three-coat system using SuperFlex or DuraFlex. Consult GrailCoat WorldWide, LLC for assistance in determining the appropriate system and materials for the specific application.

- B. Base Coat, Top Coat, and Texture Coat: **SuperFlex** acrylic-modified cement.
1. Description: 100 percent acrylic polymer. Class B fire rated.
 2. Bond Strength, ASTM C 321: Minimum of 300 psi.
 3. Thermal Coefficient of Expansion, ASTM D 696: Maximum of 10 x 10-6.
 4. ICBO Permeability Test: Pass.
 5. Salt Spray Resistance, ASTM B 117, 300 Hours:
 - a. Blistering: None.
 - b. Rusting: None.
 6. Accelerated Weathering, ASTM G 154, 500 Hours:
 - a. Color Change: None.
 - b. Chalking: None.
 7. Humidity Resistance, ASTM D 4585, 500 Hours:
 - a. Blistering: None.
 8. Flame Spread, ASTM E 84:
 - a. Rated: Class B
 - b. Flame Spread Index: 40.
 - c. Smoke Development Index: 175.



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- C. Base Coat, Top Coat, and Texture Coat: **DuraFlex** acrylic-modified cement.
1. Description: 100 percent acrylic polymer. Class B fire rated.
 2. Bond Strength, ASTM C 321: Minimum of 300 psi.
 3. Thermal Coefficient of Expansion, ASTM D 696: Maximum of 10×10^{-6} .
 4. ICBO Permeability Test: Pass.
 5. Salt Spray Resistance, ASTM B 117, 300 Hours:
 - a. Blistering: None.
 - b. Rusting: None.
 6. Accelerated Weathering, ASTM G 154, 500 Hours:
 - a. Color Change: None.
 - b. Chalking: None.
 7. Humidity Resistance, ASTM D 4585, 500 Hours:
 - a. Blistering: None.
 8. Flame Spread, ASTM E 84:
 - a. Rated: Class A
 - b. Flame Spread Index: 0.
 - c. Smoke Development Index: 0.
- D. Mesh: GrailCoat™ **Standard** alkali-resistant fiberglass reinforcing mesh.
1. Alkali resistant.
 2. Color: White.
 3. Weight: 4.40 ounces per square yard
 4. Count (WxF) 12x6
 5. Warp Yarns: EGC 27 1/0
 6. Fill Roving 1800 yd/lb
 7. Thickness: 0.0145 inches
 8. Tensile (W/F) 140/170 pounds per inch
- E. Mesh: GrailCoat™ **Deck Mesh – Ultra Impact** alkali-resistant fiberglass reinforcing mesh.
1. Alkali resistant
 2. Color: White
 3. Weight: 20.50 ounces per square yard
 4. Count (WxF) 16x3
 5. Warp Yarns: 450 yd/lb
 6. Fill Roving: 218 yd/lb
 7. Thickness 0.0550 inches
 8. Tensile (W/F) 750/600 pounds per inch



PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to receive waterproof concrete coating.
- B. Notify Architect if surfaces are not acceptable.
- C. Do not begin surface preparation or application until unacceptable conditions have been corrected.

3.2 SURFACE PREPARATION

- A. Protect surfaces not to receive concrete waterproof coating.

Specifier Notes: GrailCoat is a thin-coat system that does not hide damages or defects in a substrate. Correct all substrate problems before applying the concrete waterproof coating.

- B. Prepare surfaces in accordance with manufacturer's instructions.
- C. Remove dirt, dust, efflorescence, chalky powder, mildew, loose material, and other surface contaminants which could adversely affect adhesion or appearance of concrete waterproof coating.
- D. Ensure surfaces are sound and dry.
- E. Repair or replace damaged surfaces and fill-in cracks as approved by Architect.
- F. Concrete, Masonry, and Wood:
 - 1. Test surfaces with moisture-testing device.
 - 2. Do not apply concrete waterproof coating when moisture content of surface exceeds 15 percent, except in accordance with manufacturer's instructions.
 - 3. Test sufficient areas, in each space and as often as necessary, to determine proper moisture content for application.
 - 4. Fill gaps, indentations, cracks, and screw holes.
- G. Metals: Clean surfaces in accordance with SSPC-SP 3.
- H. Insulated Concrete Forms and Foam:
 - 1. Remove surface oxidizing.
 - 2. Clean surfaces of loose particles.
 - 3. Fill-in large crevices, indentations, gaps, and screw holes.

3.3 MIXING

- A. Mix materials in accordance with manufacturer's detailed instructions.
- B. Ensure mixture is smooth, lump-free, and uniformly colored.



3.4 APPLICATION

- A. Apply materials in accordance with manufacturer's detailed instructions.
- B. Apply concrete waterproof coating in accordance with manufacturer's instructions at locations indicated on the Drawings.
- C. Ensure uniform distribution and full-coat continuous coverage of coating.
- D. Completely cover mesh with the first coat.
- E. Apply coating without holidays, pin holes, lap marks, and air bubbles.
- F. Cure Time: Allow a minimum of 24 hours between coating applications.
- G. A minimum of two complete coats are required for vertical (wall) applications.
- H. A minimum of three complete coats are required for horizontal (deck and roof) applications.
- I. Horizontal applications (decks and roofs) require flashing at angles as described in the manufacturer's detailed instructions.

3.5 ADJUSTING

- A. Touch-up and repair coating that is not acceptable to Architect.

3.6 CLEANING

- A. Immediately remove coating spatters from surfaces not to receive concrete waterproof coating.

3.7 PROTECTION

- A. Protect applied concrete waterproof coating from damage during construction.

END OF SECTION

