SECTION 09 94 13

Sika Thorocoat® -200LR Waterproof Coating

NOTES TO SPECIFIERS:

PLEASE UPDATE YOUR MASTER SPECIFICATIONS TO REFLECT THE COMPANY AND PRODUCT NAME CHANGES.

THE PURPOSE OF THIS GUIDE SPECIFICATION IS TO ASSIST THE SPECIFIER IN DEVELOPING A PROJECT SPECIFICATION FOR THE USE OF SIKA PRODUCTS. THIS GUIDE DOCUMENT HAS BEEN PREPARED TO BE PART OF A COMPLETE PROJECT MANUAL. IT IS NOT INTENDED TO BE A “STAND ALONE” DOCUMENT, AND IT IS NOT INTENDED TO BE COPIED DIRECTLY INTO A PROJECT MANUAL.

THIS GUIDE SPECIFICATION WILL NEED TO BE CAREFULLY REVIEWED FOR APPROPRIATENESS FOR THE GIVEN PROJECT AND EDITED ACCORDINGLY TO COMPLY WITH PROJECT-SPECIFIC REQUIREMENTS.

# PART 1 - GENERAL

* 1. SUMMARY
     1. Section Includes:
        1. Application of one coat water-based, high-build, modified acrylic with 88 percent light reflectance rating.

DELETE SECTIONS BELOW NOT RELEVANT TO THIS PROJECT; ADD OTHERS AS REQUIRED.

* + 1. Related Sections:
       1. Section 03 30 00 – Cast-in-Place Concrete.
       2. Section 03 41 00 – Precast Structural Concrete.
       3. Section 04 20 00 – Unit Masonry Assemblies.
       4. Section 05 12 00 – Structural Steel Framing.
       5. Section 05 50 00 – Metal Fabrications.
       6. Section 06 10 00 – Rough Carpentry.
       7. Section 09 24 00 – Portland Cement Plastering.

# SYSTEM DESCRIPTION

* + 1. Performance Requirements:
       1. Elongation at Break: Greater than 35 percent per ASTM D412.
       2. Tensile Strength: 567 psi (3.9 MPa) per ASTM D412.
       3. Water-Vapor Permeance: 2.1 dry perms per ASTM D1653.
       4. Coverage Rates: Smooth: 125 to 175 square feet per gallon (3.1 to 4.3 square m per L).
       5. Wet Film Thickness (WFT): Smooth: 8 to 13 mils (0.0.20 to 0.33 mm).
       6. Dry Film Thickness (DFT): Smooth: 4 to 5.5 mils (0.10 to 0.14 mm).

# SUBMITTALS

* + 1. Comply with Section [01 33 00] [ ].
    2. Product Data: Submit manufacturer's technical data sheets,
    3. LEED Submittals: Comply with requirements for each product to achieve points indicated in LEED Project Checklist provided by the architect/engineer.
    4. Submit list of project references as documented in this Specification under Quality Assurance Article. Include contact name and phone number of the person charged with oversight of each project.

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|  | E. | Quality Control Submittals:  Provide protection plan of surrounding areas and non-cementitious surfaces. |
| 1.4 |  | QUALITY ASSURANCE |
|  | A. | Comply with Section [0140 00] [ ]. |
|  | B. | Qualifications: |
|  |  | 1. Manufacturer Qualifications: Company with minimum 15 years of experience in manufacturing of specified products and systems. |
|  |  | 2. Manufacturer Qualifications: Company shall be ISO 9001:2000 Certified. |
|  |  | 3. Applicator Qualifications: Company with minimum of 5 years’ experience in application of specified products and systems on projects of similar size and scope and is acceptable to product manufacturer. |
|  |  | a. Successful completion of a minimum of 5 projects of similar size and complexity to specified Work. |
|  | C. | Field Sample: |
|  |  | 1. Install at project site or another pre-selected area of building, minimum 4 feet by 4 feet (1.2 m by 1.2 m), using specified system. |
|  |  | 2. Apply material in strict accordance with manufacturer’s written application instructions. |
|  |  | 3. Manufacturer’s representative or designated representative will review technical aspects; surface preparation, repair, and workmanship. |
|  |  | 4. Field sample will be standard for judging workmanship on remainder of project. |
|  |  | 5. Maintain field sample during construction for workmanship comparison. |
|  |  | 6. Do not alter, move, or destroy field sample until work is completed and approved by architect/engineer. |
|  |  | 7. Obtain architect/engineer’s written approval of field sample before start of material application, including approval of aesthetics, color, texture and appearance. |
|  | D. | Preconstruction Field-Adhesion Testing: |
|  |  | 1. Perform adhesion per ASTM D3359, Measuring Adhesion by Tape, Method A. Minimum adhesion rating of 4A is required on 0 to 5 scale. |
| 1.5 |  | DELIVERY, STORAGE AND HANDLING |
|  | A. | Comply with Section [01 60 00] [ ]. |
|  | B. | Comply with manufacturer’s ordering instructions and lead-time requirements to avoid construction delays. |
|  | C. | Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact. |
|  | D. | Store tightly sealed materials off ground and away from moisture, direct sunlight, extreme heat, and freezing temperatures. |
| 1.6 |  | PROJECT CONDITIONS |
|  | A. | Environmental Requirements: |
|  |  | 1. Ensure that substrate surface and ambient air temperature are minimum of 40 degrees F  (4 degrees C) and rising at application time and remain above 40 degrees F (4 degrees C) for at least 24 hours after application. Ensure that frost or frozen surfaces are thawed and dry. |
|  |  | 2. Do not apply material if snow, rain, fog, and mist are anticipated within 12 hours after application. Allow surfaces to attain temperature and conditions specified before proceeding with coating system application. |
|  |  | 3. Do not apply over sealant joints. |

4. Do not apply to horizontal traffic-bearing surfaces.

# PART 2 - PRODUCTS

* 1. MANUFACTURERS

Subject to compliance with requirements, provide products from the following manufacturer:

Sika Corporation, 201 Polito Avenue, Lyndhurst NJ 07071. Toll Free 800-933-SIKA (7452), www.sikausa.com.

* + 1. Substitutions: Comply with Section [01 60 00] [ ].
    2. Specifications and Drawings are based on manufacturer's proprietary literature from Sika. Other manufacturers shall comply with minimum levels of material, color selection, and detailing indicated in specifications or on drawings. Architect/engineer will be sole judge of appropriateness of substitutions.

# MATERIALS

* + 1. One coat water-based, VOC-compliant, high-build, elastomeric, modified acrylic with 88 percent light reflectance rating consisting of acrylic polymers, with special additives dispersed in water base.
       1. Weight, per ASTM D1475: 10.6 pounds per gallon (4.8 kg per L) to 12.3 pounds per gallon (1.48 kg per L).
       2. Solids Content, per ASTM D5201:
          1. By Weight: 51.4 percent.
          2. By Volume: 44.8 percent.
       3. Viscosity: 122 KU to 131 KU per ASTM D562.
       4. pH: 8.8 to 9.3.
       5. Reflectance: 88 percent.
       6. Color: White.
       7. Acceptable Product: Sika Thorocoat® -200LR.

# PART 3 - EXECUTION

* 1. EXAMINATION
     1. Comply with Section [01 70 00] [ ].

# SURFACE PREPARATION

* + 1. Protect adjacent work areas and finish surfaces from damage during coating system application.
    2. Ensure that substrate is sound, clean, dry and free of dust, dirt, oils, grease, laitance, efflorescence, mildew, fungus, biological residues, chemical contaminants and other contaminants that could prevent proper adhesion.
    3. Clean surface by using high-pressure waterblasting with or without abrasives added to water stream, to achieve surface with texture similar to 100 grit sandpaper.
    4. Some stains and surface contaminants may require chemical removal. When chemical cleaners are used, neutralize compounds and fully rinse surface with clean water. Allow surface to dry before proceeding.

Ensure area being repaired is structurally sound and fully cured.

* + 1. Remove blisters and loose or delaminated areas.
    2. Sand or grind edges of previous coating to ensure adhesion and smooth transition to new material. Sand edges to featheredge.
    3. Wash down prepared surfaces and allow to completely dry.
    4. Concrete Surfaces:
       1. In addition to laitance and contaminants, remove form-release agents or previously applied sealers.
       2. Remove form tie wires and repair holes, small voids, and spalls using appropriate repair product approved by coating manufacturer.
       3. Abrasive-blast slick, dense concrete surfaces or use primer approved by manufacturer. Test surface for proper adhesion as specified in Part 1.
    5. Brick and Concrete Masonry Unit Surfaces:
       1. Remove fins and mortar droppings. Ensure mortar joints are sound and free of voids and cracks.
       2. Ensure there are no gaps, cracks, or voids greater than 2 mils (0.05 mm). Repoint or fill voids with appropriate patching product approved by manufacturer.
       3. Apply base coat of primer approved by manufacturer to CMU surfaces.
    6. Existing Acrylic Coating Surfaces:
       1. Sand or grind edges of existing coating to ensure adhesion and smooth transition of new material. Sand edges of area to featheredge.
       2. Wash down and allow to completely dry.
    7. Chalky Surfaces:
       1. Treat chalky surfaces, as defined by ASTM D4214, Test Method A, with water cleaning and application of primer approved by coating manufacturer.

# PRIMING

Use primer only to stabilize existing substrates or coatings that are chalking or friable (powdery) after power washing. Ensure that primer for proper adhesion of coating material can bind existing surfaces or paint. Adhesion testing is specified in Part 1.

# APPLICATION

* + 1. Brush Application: Use a nylon brush. On open-textured surfaces, thoroughly work coating into pores of surface to fill completely. Brush should only be used for small, inaccessible areas.
    2. Roller Application:
       1. Use a 1/2 inch to 3/4 inch (12.5 mm to 19 mm) nap roller cover (lamb’s wool is preferred).
       2. Completely saturate roller and keep it loaded with coating to build required mils. Never dry roll.
       3. Roll coating in consistent fanlike pattern to achieve uniform mil thickness.
       4. Cross roll to achieve uniform thickness and maintain wet edge. Backroll material in one direction as stroke variations may result in uneven color and texture.
    3. Spray Application: Use spray equipment recommended by spray equipment manufacturer.

# CURING

* + 1. Drying time to touch is 2 to 4 hours at 70 degrees F (21 degrees C) and 50 percent relative humidity.

# CLEANING

* + 1. Clean tools and equipment with soapy water.
    2. Clean up and properly dispose of debris remaining on project site related to application.
    3. Remove temporary coverings and protection from adjacent work areas.

END OF SECTION

Disclaimer-

The preceding specifications are provided by Sika Corporation as a guide for informational purposes only and are not intended to replace sound engineering practice and judgment and should not be relied upon for that purpose. **Sika Corporation makes no warranty of any kind, either express or implied, as to the accuracy, completeness or the contents of these guide specifications**. Sika Corporation assumes no liability with respect to the provision or use of these guide specifications, nor shall any legal relationship be created by, or arise from, the provision of such specifications **SIKA SHALL NOT BE RESPONSIBLE UNDER ANY LEGAL THEORY TO ANY THIRD PARTY FOR ANY DIRECT OR CONSEQUENTIAL DAMAGES OF ANY KIND ARISING FROM THE USE OF THESE GUIDE SPECIFICATIONS.** The specifier, architect, engineer or design professional or contractor for a particular project bears the sole responsibility for the preparation and approval of the specifications and determining their suitability for a particular project or application.

Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's most current Technical Data Sheet, product label and Material Safety Data Sheet which are available at www.sikausa.com or by calling (800) 933-7452. Nothing contained in any Sika materials relieves the user of the obligation to read and follow the warnings and instructions for each Sika product as set forth in the current Technical Data Sheet, product label and Material Safety Data Sheet prior to product use.