SECTION 09 97 03

Sika Thorocoat® 200

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 water-based, 100 percent acrylic, waterproof coating designed for airless spray applications.

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 07 24 15 – Exterior Insulation and Finish System.
       5. Section 09 24 00 – Portland Cement Plastering.

# SYSTEM DESCRIPTION

* + 1. Performance Requirements:
       1. Light Reflectance: Greater than 91 percent per ASTM E1347.
       2. Gloss: 3.0 per ASTM D523.
       3. Wind-Driven Rain, TT-C-555B: Passed.
       4. Water-Vapor Permeance: 25 perms per ASTM E96.
       5. Accelerated Weathering at 5,000 Hours: Passes per ASTM G26, Type B.
       6. Freeze/Thaw Resistance at 50 Cycles: Passed per ICBO.
       7. Salt Spray Resistance: Passes per ASTM B117 at 300 hours.
       8. Fungus Resistance: No growth per ASTM D3273.
       9. Flexibility, per ASTM D522, 1 inch mandrel: No cracking.
       10. Impact Resistance, per ASTM D2794:
           1. Direct: 82 inch-pounds.
           2. Reverse: 78 inch-pounds.
       11. Surface Burning Characteristics, per ASTM E84:
           1. Flame Spread: 0.
           2. Smoke: 5.
    2. Approximate Coverage Rates:
       1. Rate: 75 to 125 square feet per gallon (1.84 to 3.0 sm per L).
       2. Wet Film Thickness (WFT): Smooth: 13 to 22 mils (330 to 559 microns).
       3. Dry Film Thickness (DFT): Smooth: 5 to 8 mils (127 to 203 microns).

# SUBMITTALS

* + 1. Comply with Section [01 33 00] [ ].
    2. Product Data: Submit manufacturer's technical bulletins and MSDS on each product.
    3. Submit list of project references as documented in this Specification under Quality Assurance Article. Include contact name and phone number of person charged with oversight of each project.
    4. Quality Control Submittals:
       1. Provide protection plan of surrounding areas and non-cementitious surfaces.

# QUALITY ASSURANCE

* + 1. Comply with Section [01 40 00] [ ].
    2. 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.
          1. Successful completion of a minimum of 5 projects of similar size and complexity to specified Work.
    3. Field Sample:
       1. Install at Project site or pre-selected area of building an area for field sample, 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.
       7. Obtain Architect’s written approval of field sample before start of material application, including approval of aesthetics, color, texture, and appearance.
    4. 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.

# DELIVERY, STORAGE AND HANDLING

* + 1. Comply with Section [01 60 00] [ ].
    2. Comply with manufacturer’s ordering instructions and lead-time requirements to avoid construction delays.
    3. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
    4. Store tightly sealed materials off ground and away from moisture, direct sunlight, extreme heat, and freezing temperatures.

# PROJECT CONDITIONS

* + 1. 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 24 hours after application. Allow surfaces to attain temperature and conditions specified before proceeding with coating application.
       3. Do not apply over dynamic sealant joints.
       4. Do not apply to horizontal traffic-bearing surfaces.

# PART 2 - PRODUCTS

* 1. MANUFACTURERS
     1. 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 will be sole judge of appropriateness of substitutions.

# MATERIALS

* + 1. Water-based, 100 percent acrylic, waterproofing coating consisting of water, acrylic emulsion, fillers, and other proprietary ingredients.
       1. Density: 11.3 pounds per gallon (1.35 kg/L) to 12.3 pounds per gallon (1.47 kg/L) per ASTM D1475.
       2. Solids Content, per ASTM D5201:
          1. By Weight: 56.3 percent.
          2. By Volume: 39 percent.
       3. Viscosity: 102 KU to 103 KU per ASTM D562.
       4. VOC Content: Less than 100 g/L less water and exempt solvents per ASTM D3960.

DELETE COLORS BELOW NOT REQUIRED FOR PROJECT.

* + - 1. Color:
         1. Pastel.
         2. Medium.
         3. Ultra.
         4. Neutral.
         5. 50 standard colors available on color card.
      2. Texture: Smooth.
      3. Acceptable Product: Sika Thorocoat® 200.

# MIXING

* + 1. Mechanically mix sealer with slow-speed drill and mixing paddle to ensure color uniformity and to minimize air entrapment.
    2. In multi-pail applications, mix contents of each new pail into partially used pail to ensure color consistency and smooth transitions from pail to pail.

# 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 ICIRI CSP 3.
    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.
    5. Ensure area being repaired is structurally sound and fully cured.
    6. Remove blisters and loose or delaminated areas.
    7. Sand or grind edges of previous coating to ensure adhesion and smooth transition to new material. Sand edges to featheredge.
    8. Wash down prepared surfaces and allow to completely dry.
    9. 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 coating manufacturer. Test surface for proper adhesion as specified in Part 1.
    10. 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 primer approved by coating manufacturer..
    11. Plaster and Stucco Surfaces:
        1. Clean surfaces and remove debonded or delaminated plaster or stucco.
        2. Repair with material approved by coating manufacturer.
        3. Allow new plaster or stucco to cure minimum of 14 days at 70 degrees F (21 degrees C) and 50 percent relative humidity or until pH level has reached 10. Allow longer cure times if temperatures are lower or relative humidity is higher.
        4. After cleaning and profiling, prime chalky surfaces with primer approved by coating manufacturer and allow primer to dry.
    12. Exterior Insulation Finish System Surfaces:
        1. Refasten or re-adhere delaminated or loose expanded polystyrene (EPS) insulation per manufacturer‘s approved methods.
        2. Replace or patch missing or damaged EPS to its original condition.
        3. Finish with trowel acrylic finish to match and blend with existing texture.
        4. Allow repaired areas to fully cure.
        5. Refer to EIFS manufacturer‘s product data sheet for appropriate repair and procedures.
    13. 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.
    14. Chalky Surfaces: Treat chalky surfaces, as defined by ASTM D4214, Test Method A, with water cleaning and application of primer approved by coating manufacturer.

# DETAIL PREPARATION

* + 1. Apply joint sealant where appropriate on support columns and other details. Inspect expansion joints. Ensure there is no deteriorated sealant, adhesion loss, or non-elastomeric caulking in joints. Replace defective sealant with sealant approved by coating manufacturer.
    2. Apply and tool liberal amount of patching compound or form cant bead of sealant approved by coating manufacturer wherever there is change in direction, where 2 walls abut, and at column and wall intersections.
    3. If movement is anticipated where dissimilar substrates join (for example, stucco and concrete or brick and CMU), properly clean joint and seal with sealant approved by coating manufacturer.
    4. Inspect through-wall penetrations, including electrical, lighting, signage, plumbing, HVAC, and fire- sprinkler piping, for watertight seal. Repair with sealant approved by coating manufacturer.
    5. Inspect flashings, including cap flashing and roof flashing for watertight seal. Repair with sealant approved by coating manufacturer.
    6. Recaulking of existing windows is essential in waterproofing and renovation of existing structures. Inspect perimeter joints and mullions and recaulk with sealant approved by coating manufacturer.

DELETE THE FOLLOWING PARAGRAPH IF NO FLUSH OR SHEAR WINDOW CONDITIONS.

* + 1. Rout flush or shear window surface transitions to concrete or stucco to form 1/4-inch by 1/4-inch joint. Caulk with sealant approved by coating manufacturer. Allow sealant to cure before proceeding.
    2. Apply coat of brush-grade patching compound to stucco and masonry window sills (primed, if required). Create smooth surface that drains away from window.
    3. Cracks smaller than hairline can be bridged with knife-grade or brush-grade patching compounds.
    4. Chip or grind out nonmoving cracks larger than hairline. Remove dust and pack with knife-grade patching compound. Bridge crack with brush-grade patching compound. Brush narrow band directly into crack using brush, sponge, or other means to match substrate texture and reduce telegraphing of patches through finish coat. On textured substrates, use texturized patching compound to minimize telegraphing.
    5. Rout out dynamic or moving cracks to minimum of 1/4 inch by 1/4 inch (6 mm by 6 mm), then fill with sealant approved by coating manufacturer. Once sealant is tooled and cured, proceed with crack repair as described previously.
    6. Repair cracks and treat back side of parapets in same manner as exterior walls, terminating at roof counter flashings. If top of parapet wall is exposed masonry, apply coat of patching compound to create smooth, well-draining surface. Recaulking of reglet may be required.

# PRIMING

* + 1. 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.
    2. Apply primers or block fillers acceptable to coating material manufacturer.
    3. Ensure CMU and other porous surfaces are clean, dry, and free of contaminants. Fill CMU faces with block filler and back roll to eliminate pinholes. Apply by working material into pores, crevices, and voids. Allow block filler to dry before proceeding, typically 24 to 48 hours. Coverage rate depends on porosity and texture of CMU surface. Apply to dry, cured CMU and mortar only.
    4. Apply coating after primer and block filler have sufficiently dried.
    5. Special substrates, such as insulated wall systems, may require different primer system. Contact coating manufacturer for specific recommendation.

# APPLICATION

* + 1. General:
       1. For uniformity of color and texture, use consistent application techniques throughout Project.
       2. Maintain proper wet-film thickness (WFT) during application to ensure performance characteristics desired.
       3. Work to natural break in surfaces before stopping Work.
       4. Work from wet edge with 50 percent overlap.
       5. Use sufficient material to provide color uniformity but avoid buildups and runs.
       6. Apply coating in manner to obtain pinhole-free, consistent film build on treated surfaces.
    2. Brush Application:
       1. Application by brush is recommended only for small inaccessible areas such as touch-ups.
       2. Use nylon brush only.
    3. Roller Application:
       1. Use a 3/4” – 1 ¼” 12.5 mm to 32 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 1 direction as stroke variations may result in uneven color and texture.
    4. Spray Application:
       1. Use large airless spray equipment.
       2. Some substrates will require backrolling after spray application:

# CURING

* + 1. Drying time is based on 70 degrees F (21 degrees C) and 50 percent relative humidity if applied at recommended thickness).
       1. To Touch: 1 to 2 hours.
       2. To Recoat: Within 6 hours.
       3. To Full Cure: 5 days.

# 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-

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