SECTION 09 96 53

Sika Thorolastic® 850 Elastomeric 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 water-based, VOC-compliant, silicone-modified, elastomeric decorative coating for waterproofing exterior, above-grade vertical surfaces.

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

* + 1. Related Sections:
       1. Section 03 30 00 – Cast-in-Place Concrete.

Section 04 20 00 – Unit Masonry Assemblies.

Section 04 21 13 – Brick Masonry.

Section 07 24 00 – Exterior Insulation Finish System.

Section 09 24 00 – Portland Cement Plastering.

# SUBMITTALS

* + 1. Comply with Section [01 33 00] [ ].
    2. Product Data: Submit manufacturer's technical data sheets and LEED product information for 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:

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.
       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 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 material.
       2. Apply material in 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.

# 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.
    5. Do not store below 35 degrees F (2 degrees C).

# 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 12 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 application.
       3. Do not apply over sealant joints.
       4. Do not apply to traffic-bearing or other horizontal 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, VOC-compliant, silicone-modified, anti-carbonation, elastomeric waterproof coating.
       1. Acceptable Product: Sika Thorolastic® 850.
    2. Performance Requirements: Provide coating complying with the following requirements:
       1. Compliance: Federal Specification TT-C-555B, Type II.
       2. Weight, pastel base: 10.6 lbs per gal (1.3 kg/L).
       3. Solids Content:
          1. By Weight: 55.1 percent.
          2. By Volume: 45.7 percent.
       4. Viscosity: 131 KU.
       5. Elongation at Break, ASTM D2370: 784.5 percent.
       6. Tensile Strength, ASTM D2370: 40 psi (0.28 MPa).
       7. Wind-Driven Rain, Federal Specification TT-C-555B, 98 mph: Passes.
       8. Artificial Weathering, ASTM G155, Xenon Arc, 4,000 hours: No chalking, checking, cracking, or adhesion loss. Color change, ΔE: Less than 2.6.
       9. CO2 Diffusion Resistance, Engelfried, at 10 dry mils: 323,000, 8-inch (203-mm) equivalent concrete layer.
       10. Water Vapor Transmission, ASTM D1653 and E96:
           1. Wet: 13 perms.
           2. Dry: 1.62 perms.
       11. Dirt Pick-Up, ASTM D3719, at 2 months: 92.91.
       12. Hiding, ASTM D2805, at 6 wet mils (0.15 mm): 99.8 percent opacity.
       13. Low-Temperature Flexibility, ASTM D522: Passes.
           1. 1/8-inch (3.2-mm) mandrel at minus 30 degrees F (minus 34 degrees C).
       14. VOC Content:
           1. Maximum 0.7 lbs per gal (84.0 g/L), less water and exempt solvents.
    3. Approximate Coverage Rates:
       1. Substrates, square feet per gallon (m2/L), per coat:
          1. Troweled Stucco: 60 to 80 (1.5 to 2.0).
          2. Blown on Stucco: 50 to 70 (1.2 to 1.7).
          3. CMU: 50 to 70 (1.2 to 1.7).
          4. Brick: 60 to 80 (1.5 to 2.0).
          5. Concrete: 80 to 100 (2.0 to 2.5).
       2. Average Wet Film Thickness: 16 to 33 mils (0.41 to 0.83 mm).
       3. Average Dry Film Thickness: 7 to 15 mils (0.18 to 0.38 mm).

COATING IS AVAILABLE IN WHITE AND 4 TINT BASES. A TOTAL OF 463 COLORS IN THE COLOR PORTFOLIO CAN BE CREATED FROM THE 4 TINT BASES. REFER TO THE POPULAR PALETTE FOR WALL COATINGS FOR COLOR FORMULAS. REFER TO THE SIKA COLOR PORTFOLIO FOR THE MOST POPULAR 40 COLORS. FOR CUSTOM COLOR FORMULATIONS, CONSULT WITH SIKA.

* + 1. Colors: .
    2. Texture: Smooth.

# PART 3 - EXECUTION

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

# SURFACE PREPARATION

* + 1. Protection: Protect adjacent Work areas and finish surfaces from damage during coating application.
    2. Prepare surfaces in accordance with manufacturer’s instructions.
    3. Ensure that substrate is sound, clean, dry, and free of dust, dirt, oils, grease, laitance, efflorescence, mildew, fungus, biological residues, and other contaminants that could prevent proper adhesion.
    4. Ensure concrete substrates have a minimum 28-day cure and are free of bond-inhibiting contaminants.
    5. Clean surface to achieve texture similar to medium-grit sandpaper.
    6. Repair holes and spalled and damaged concrete with repair materials approved by coating manufacturer.
    7. Remove protruding concrete accessories and smooth out irregularities.
    8. When chemical cleaners are used, neutralize compounds and fully rinse surface with clean water. Allow surface to dry before proceeding.
    9. Remove blisters or delaminated areas and sand edges to smooth rough areas and provide transition to existing paint areas.
    10. Check adhesion of existing paint in accordance with ASTM D3359, measuring adhesion by Tape Method A.
    11. Treat cracks greater than 1/32 inch (0.8 mm) with knife-grade or brush-grade patching compound.
    12. Treat cracks greater than 1/4 inch (6 mm) as expansion joints and fill with sealant 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 seals. Repair with sealant approved by coating manufacturer.
    6. Recaulk existing windows. 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.
    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.
    7. Ensure block and other porous surfaces are clean, dry, and free of contaminants. Fill concrete block faces with 1 nylon brush coat of block filler. Apply by working material into pores, crevices, and voids.

# PRIMING

Prime uncoated concrete and masonry substrates, except those treated with block filler, in accordance with manufacturer’s instructions.

# APPLICATION

* + 1. Apply coating in accordance with manufacturer’s instructions.
    2. Apply coating in pinhole-free, continuous membrane for waterproofing integrity.

# PROTECTION

* + 1. Protect applied coating from damage during construction.

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.