SECTION 09 96 53

Sika Thorolastic® 750 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 high-build, water-based, elastomeric, 100 percent acrylic, waterproof coating.

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.

# 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.
       8. Perform adhesion test in accordance with ASTM D3359, Method A. Minimum adhesion rating of 4A 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. Do not apply material when substrate or ambient temperature is 40 degrees F (4 degrees C) or below or is expected to fall below 40 degrees F (4 degrees C) within 24 hours after application.
       2. Do not apply material if rain is expected within 24 hours of application.
       3. Do not apply material to sloped (less than 60 degrees) or horizontal surfaces.

# PART 2 - PRODUCTS

* 1. MANUFACTURERS
  2. 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. High-build, water-based, elastomeric, 100 percent acrylic, waterproof coating.
       1. Acceptable Product: Sika Thorolastic® -750 Sika.
    2. Sika Thorolastic® -750 Smooth:
       1. Density, ASTM D1475: 11.2 to 12.2 lbs per gal (1.34 to 1.46 kg/L).
       2. Solids Content, white, ASTM D5201:

1. By Weight: 64.2 percent.
2. By Volume: 50 percent.
   * + 1. Viscosity, ASTM D562: 127 to 135 KU.
       2. VOC Content, ASTM D3960: 0.32 to 0.42 lbs per gal (38 to 50 g/L), less water and exempt solvents.
     1. Sika Thorolastic® -750 Fine:
        1. Density, ASTM D1475: 10.2 to 11.2 lbs per gal (1.22 to 1.34 kg/L).
        2. Solids Content, ASTM D5201:
3. By Weight: 65.5 percent.
4. By Volume: 56 percent.
   * + 1. Viscosity, ASTM D562: 127 to 135 KU.
       2. VOC Content, ASTM D3960: 0.32 to 0.42 lbs per gal (38 to 50 g/L), less water and exempt solvents.
     1. Sika Thorolastic® -750 Coarse:
        1. Density, ASTM D1475: 9.9 to 10.9 lbs per gal (1.19 to 1.31 kg/L).
        2. Solids Content, ASTM D5201:
5. By Weight: 64.5 percent.
6. By Volume: 58 percent.
   * + 1. Viscosity, ASTM D562: 127 to 135 KU.
       2. VOC Content, ASTM D3960: 0.32 to 0.42 lbs per gal (38 to 50 g/L), less water and exempt solvents.
     1. Performance Requirements: Sika Thorolastic® -750 applied at 16 mils DFT:
        1. Ultimate Elongation, ASTM D412: 344 percent.
        2. Elongation Recovery, ASTM D412:
7. After 10 Minutes: 96.9 percent.
8. After 24 Hours: 98.4 percent.
   * + 1. Ultimate Tensile Strength, ASTM D412: 220 psi (1.5 MPa).
       2. Crack Bridging, PR EN 1062-7:
9. At minus 77 degrees F (minus 60 degrees C): 12 mils (0.3 mm).
10. At 32 degrees F (0 degrees C): 19.5 mils (0.5 mm).
11. At 73 degrees F (23 degrees C): 27.5 mils (0.7 mm).
    * + 1. Flexibility, ASTM D522, at minus 30 degrees F (minus 34 degrees C): 1/8 inch (3 mm) mandrel.
        2. Pull-Off Strength Adhesion, ASTM D4541: 210 psi (1.4 MPa).
        3. Wind-Driven Rain, Federal Specification TT-C-555B: Passes.
        4. Water-Vapor Permeance, ASTM D1653: 10 perms.
        5. Carbon-Dioxide Diffusion, PR EN 1062-6:
12. R (equivalent air-layer thickness): 263 feet (80 m).
13. Sc (equivalent concrete thickness): 8 inches (20 cm).
    * + 1. Accelerated Weathering, ASTM G23, Type D, 5,000 hours: Passes.
        2. Visual Color Change, ASTM D1729, 5,000 hours: Passes.
        3. Chalking, ASTM D4214, 5,000 hours: Passes.
        4. Freeze/Thaw Resistance, ASTM C67, 60 cycles: Passes.
        5. Salt-Spray Resistance, ASTM B117, 300 hours: Passes.
        6. Dirt Pick-Up, ASTM D3719, after 6 months exposure: 94.33 percent.
        7. Mildew Resistance, ASTM D3273 and 3274: No growth.
      1. Approximate Coverage Rate: 50 to 100 sq ft per gal (4.6 to 9.3 m2/L).
      2. Wet Film Thickness (WFT):
         1. Smooth: 16 to 32 mils (406 to 813 microns).
         2. Fine: 16 to 32 mils (406 to 813 microns).
         3. Coarse: 16 to 32 mils (406 to 813 microns).
      3. Dry Film Thickness (DFT):
         1. Smooth: 8 to 16 mils (203 to 406 microns).
         2. Fine: 9 to 18 mils (229 to 457 microns).
         3. Coarse: 9 to 19 mils (229 to 483 microns).

COATING IS AVAILABLE IN 4 TINT BASES AND 48 STANDARD COLORS THROUGH THE ELEMENTS COLOR PROGRAM. COLOR FORMULATIONS ARE AVAILABLE THROUGH THE ELECTRONIC THORO TINT MANUAL. FOR CUSTOM COLOR FORMULATIONS, SIKA.

* + 1. Colors: .

DELETE TEXTURE BELOW NOT REQUIRED FOR PROJECT.

* + 1. Texture:
       1. Smooth.
       2. Fine.
       3. Coarse.

# PART 3 - EXECUTION

* + - * 1. EXAMINATION

Comply with Section [01 70 00] [ ].

# SURFACE PREPARATION

Protection: Protect adjacent Work areas and finish surfaces from damage during coating application.

Prepare surfaces in accordance with manufacturer’s instructions.

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.

Clean surface to achieve texture similar to medium-grit sandpaper.

Repair holes and spalled and damaged concrete with repair materials approved by coating manufacturer.

Remove protruding concrete accessories and smooth out irregularities.

When chemical cleaners are used, neutralize compounds and fully rinse surface with clean water. Allow surface to dry before proceeding.

Remove blisters or delaminated areas and sand edges to smooth rough areas and provide transition to existing paint areas.

Check adhesion of existing paint in accordance with ASTM D3359, measuring adhesion by Tape Method A.

Concrete Surfaces:

Cure concrete a minimum of 28 days before application.

Remove laitance, bond-inhibiting contaminants, form-release agents, and sealers.

Remove form tie wires and repair holes, small voids, and spalls using appropriate repair product approved by coating manufacturer.

Abrasive-blast slick, dense concrete surfaces or use primer approved by coating manufacturer. Test surface for proper adhesion.

Brick and Concrete Masonry Unit (CMU) Surfaces:

Ensure CMUs are laid true and fully cured to full load-bearing capacity.

Remove mortar splatter and excess mortar.

Repoint or fill voids with appropriate patching product approved by coating manufacturer.

Ensure mortar joints are sound and free of voids and cracks.

Apply base coat approved by coating manufacturer to new CMUs.

Plaster and Stucco Surfaces:

Clean surfaces and remove debonded or delaminated plaster or stucco.

Repair with material approved by coating manufacturer.

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.

Prime chalky surfaces with primer approved by coating manufacturer after cleaning and profiling. Allow primer to dry.

Exterior Insulation and Finish System (EIFS) Surfaces:

Refasten or re-adhere delaminated or loose expanded polystyrene (EPS) insulation in accordance with manufacturer‘s approved methods.

Replace or patch missing or damaged EPS to original condition.

Finish with trowel acrylic finish to match and blend with existing texture.

Allow repaired areas to fully cure.

Refer to EIFS manufacturer‘s instructions for appropriate repair and procedures.

Existing Acrylic Coating Surfaces:

Sand or grind edges of existing coating to ensure adhesion and smooth transition of new material. Sand edges of area to featheredge.

Wash down and allow to completely dry.

Prime chalky surfaces with primer approved by coating manufacturer.

Crack Preparation and Pretreatment:

Treat cracks larger than 1/32 inch (0.8 mm) and up to 1/16 inch (1.6 mm) with brush-grade acrylic crack filler approved by coating manufacturer.

Treat cracks larger than 1/16 by 1/16 inch (1.6 by 1.6 mm) but less than 1/4 by 1/4 inch (6 by 6 mm) with knife-grade acrylic crack filler approved by coating manufacturer.

Treat moving cracks larger than 1/4 by 1/4 inch (6 by 6 mm) with internally plasticized polyurethane sealant approved by coating manufacturer.

Apply test application of crack repair materials in inconspicuous location to ensure compatibility and aesthetic approval.

# MIXING

Mix coating in accordance with manufacturer’s instructions to ensure uniform color and aggregate disbursement and to minimize air entrapment.

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.

# APPLICATION

Apply coating in accordance with manufacturer’s instructions.

Apply coating as a 2-coat system.

Maintain proper uniform wet-film thickness during application to ensure performance characteristics desired.

Apply coating to achieve pinhole-free, consistent film build on coated surfaces.

# PROTECTION

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.