SECTION 09 97 23

Concrete & Masonry Coatings

Sika Thorocoat® -350 Aquasol

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. Water-based, 100 percent acrylic, smooth, easy-cleaning, waterproof coating for exterior, above- grade, vertical surfaces of [concrete] [masonry] [stucco] [EIFS] [existing coatings].

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

# Related Sections

* + 1. Section 03 30 00 – Cast-in-Place Concrete.
		2. Section 04 22 00 – Concrete Unit Masonry.
		3. Section 07 24 00 – Exterior Insulation and Finish Systems.
		4. Section 09 24 00 – Cement Plastering: Stucco.

# REFERENCE STANDARDS

* + 1. ASTM D 522 / D 522M – Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings.
		2. ASTM D 1475 – Standard Test Method For Density of Liquid Coatings, Inks, and Related Products.
		3. ASTM D 3359 – Standard Test Methods for Measuring Adhesion by Tape Test.
		4. ASTM D 3719 – Standard Test Method for Quantifying Dirt Collection on Coated Exterior Panels.
		5. ASTM D 4541 – Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.
		6. ASTM D 5201 – Standard Practice for Calculating Formulation Physical Constants of Paints and Coatings.
		7. ASTM D 5590 – Standard Test Method for Determining the Resistance of Paint Films and Related Coatings to Fungal Defacement by Accelerated Four-Week Agar Plate Assay.
		8. ASTM E 96 – Standard Test Methods for Water Vapor Transmission of Materials.
		9. ASTM G 155 – Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non- Metallic Materials.
		10. ICRI 310.2R – Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair.
		11. ISO 9001:2008 – Quality Management Systems – Requirements.
		12. Miami/Dade TAS 143-95 – Dirt Pickup Resistance.

# PREINSTALLATION MEETINGS

* + 1. Convene preapplication meeting [1 week] [2 weeks] before start of application of waterproof coating.
		2. Require attendance of parties directly affecting work of this section, including Contractor, Architect, applicator, and manufacturer’s representative.
		3. Review the Following:
			1. Mock-ups.
			2. Materials.
			3. Protection of in-place conditions.
			4. Surface preparation.
			5. Mixing.
			6. Application.
			7. Protection.
			8. Coordination with other work.

# SUBMITTALS

* + 1. Comply with Section 01 33 00 – Submittal Procedures.
		2. Product Data: Submit manufacturer’s product data, including surface preparation, mixing, and application instructions.
		3. Samples: Submit manufacturer’s samples of standard colors of waterproof coating.
			1. Sample Size: Minimum 3 inches by 3 inches.
		4. Manufacturer’s Certification: Submit manufacturer’s certification that materials comply with specified requirements and are suitable for intended application.
		5. Manufacturer’s Project References: Submit manufacturer’s list of successfully completed waterproof coating projects, including project name and location, name of architect, and type and quantity of waterproof coatings furnished.
		6. Applicator’s Project References: Submit applicator’s list of successfully completed waterproof coating projects, including project name and location, name of architect, and type and quantity of waterproof coatings applied.
		7. Cleaning Instructions: Submit manufacturer’s cleaning instructions.
		8. Warranty Documentation: Submit manufacturer’s standard warranty.

# QUALITY ASSURANCE

* + 1. Manufacturer’s Qualifications:
			1. Manufacturer regularly engaged, for a minimum of 10 years, in the manufacturing of waterproof coatings of similar type to that specified.
			2. ISO 9001:2008 certified.
		2. Applicator’s Qualifications:
			1. Applicator regularly engaged, for a minimum of 5 years, in application of waterproof coatings of similar type to that specified.
			2. Employ persons trained for application of waterproof coatings.
		3. Mock-ups:
			1. Apply materials to 4-foot by 4-foot (1.2-m by 1.2-m) mock-up to verify acceptable color, texture, and adhesion.
			2. Measure adhesion in accordance with ASTM D 3359, Method A.
				1. Required Minimum Adhesion Rating, 0 to 5 Scale: 4A.
			3. Construct mock-ups using same materials, surface preparation, mixing, and application for use in the Work.
			4. Construct mock-ups at locations determined by Architect.
			5. Do not proceed until mock-ups are approved by Architect.
			6. Retain approved mock-ups.

# DELIVERY, STORAGE, AND HANDLING

* + 1. Delivery Requirements: Deliver materials to site in manufacturer’s original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
		2. Storage and Handling Requirements:
			1. Store and handle materials in accordance with manufacturer’s instructions.
			2. Keep materials in manufacturer’s original, unopened containers and packaging until installation.
			3. Store materials in clean, dry area.
			4. Store materials out of direct sunlight.
			5. Keep materials from freezing.
			6. Protect materials during storage, handling, and application to prevent contamination or damage.

# AMBIENT CONDITIONS

* + 1. Do not apply materials when substrate or ambient temperatures are 40 degrees F (4 degrees C) or below during application or within 24 hours after application.
		2. Do not apply materials when rain, snow, or excessive moisture is expected during application or within 24 hours after application.

# 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.

No substitutions without prior written approval by the Architect.

* + 1. Substitutions: Not permitted.
		2. Single Source: Provide materials from single manufacturer.

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# CONCRETE AND MASONRY COATINGS

Waterproof Coating: “Sika Thorocoat 350 Aquasol”.

* + - 1. Description: Water-based, 100 percent acrylic, smooth, easy-cleaning, waterproof coating.
			2. Use: Exterior, above-grade, vertical surfaces.
			3. Tint base: [Pastel] [Medium] [Deep] [Clear] [Pre-tinted].
			4. Color: .
			5. Hydrophobic.
			6. Breathable.
			7. UV resistant.
			8. VOC Content: Less than 50 g/L, less water and exempt solvents.
		1. Test Data:
			1. Density, ASTM D 1475: 11.8 lbs/gal (1.41 kg/L).
			2. Solids by Volume, ASTM D 5201: 41 percent.
			3. Adhesion to Concrete, ASTM D 4541, 28 Days: 500 psi.
			4. Dirt Pickup Resistance, Miami/Dade TAS 14395, Section 7.8 (Modified): Greater than 90 percent retention of reflectance.
			5. Dirt Collection, ASTM D 3719, 61 Days, 45-Degree Angle, Southern Exposure, Dc Index: 0.98.
			6. Artificial Weathering and UV Resistance, ASTM G 155, Xenon Arc, Type B, 2,000 Hours: No deleterious effect.
			7. Water-Vapor Permeance, ASTM E 96, Wet Cup Test: 20 perms.
			8. Flexibility, ASTM D 522, 7 Wet Mils, 1/2-Inch Mandrel, 40 Degrees F (4 Degrees C) and 70 Degrees F (21 Degrees C): No cracking.
			9. Fungus Resistance, ASTM D 5590, 30-Day Exposure: No growth.

# ACCESSORIES

* + 1. Patching Compound: “Sika Thorocoat 748”.
			1. Description: 100 percent acrylic-emulsion patching compound.
			2. Use: Crack repair.
		2. Block Filler: “Sika Thorocoat -749 / Block Filler”.
			1. Description: Acrylic copolymer-based block filler.
			2. Use: Base coat for new concrete masonry units.
		3. Base Coat: “Sika Thorocoat -200”.
			1. Description: Water-based, 100 percent acrylic, smooth, waterproof coating.
			2. Use: Base coat for waterproof coating.
		4. Primer: “Sika Thorocoat -100 Primer”.
			1. Description: Acrylic primer.
			2. Use: Primer for chalky surfaces.
		5. Primer: “Sika Thorocoat -150 Primer”.
			1. Description: Modified acrylic primer.
			2. Use: Primer for Sika Thorocoat coatings.

# PART 3 EXECUTION

* 1. EXAMINATION
		1. Examine surfaces to receive waterproof coating.
		2. Notify Architect of conditions that would adversely affect application or subsequent use.
		3. Do not begin surface preparation or application until unacceptable conditions are corrected.

# PROTECTION OF IN-PLACE CONDITIONS

* + 1. Protect adjacent surfaces and landscaping from contact with waterproof coating.

# SURFACE PREPARATION

* + 1. Prepare surfaces in accordance with manufacturer’s instructions.
		2. Ensure surfaces are sound, clean, dry, and free of bond-inhibiting contaminants.
		3. Ensure concrete substrates are fully cured.
		4. Repair Materials: Repair holes, spalled areas, and damaged concrete with appropriate repair materials from same manufacturer as waterproof coating.
			1. Apply repair materials in accordance with manufacturer’s instructions.
			2. Ensure repair materials are compatible with waterproof coating.
			3. Allow repair materials to fully cure.
		5. Remove protruding concrete accessories.
		6. Smooth out surface irregularities.
		7. Roughen concrete surfaces in accordance with manufacturer’s instructions to achieve surface profile of CSP 3 in accordance with ICRI 310.2R.
		8. Use chemical cleaning compounds in accordance with manufacturer’s instructions, if necessary to remove stains.
		9. Existing Coatings:
			1. Check adhesion of existing coatings in accordance with ASTM D 3359, Method A.
			2. Remove blisters and delaminated areas.
			3. Sand edges to smooth rough areas and provide transition to existing coating areas.
		10. Crack Repair:
			1. Treat cracks larger than 1/32 inch with patching compound from same manufacturer as waterproof coating.
				1. Apply patching compound in accordance with manufacturer’s instructions.
				2. Ensure patching compound is compatible with waterproof coating.
				3. Allow patching compound to fully cure.
			2. Treat cracks larger than 1/4 inch as expansion joints and fill with appropriate sealant from same manufacturer as waterproof coating.
				1. Apply sealant in accordance with manufacturer’s instructions.
				2. Ensure sealant is compatible with waterproof coating.
				3. Allow sealant to fully cure.
		11. New Concrete Masonry Units:
			1. Apply to new concrete masonry units a base coat of block filler from same manufacturer as waterproof coating.
				1. Apply block filler in accordance with manufacturer’s instructions.
				2. Ensure block filler is compatible with waterproof coating.
				3. Apply block filler to be free of pinholes.
				4. Allow block filler to fully cure.
		12. Priming:
	1. If applying to bare concrete, prime surface with Sika Thorocoat® -150 Primer prior to coating.
	2. Chalky surfaces should be primed with Sika Thorocoat® -100 Primer.

# MIXING

* + 1. Mix waterproof coating in accordance with manufacturer’s instructions.
		2. Mix waterproof coating to ensure uniform color and texture.
		3. Mix waterproof coating to minimize air entrapment.

# APPLICATION

* + 1. Apply waterproof coating in accordance with manufacturer’s instructions at locations indicated on the Drawings.
		2. Apply [2 coats of coating] [1 coat of coating over base coat].
		3. Maintain proper uniform wet-film thickness (WFT) during application.
		4. Work to natural break and maintain wet edge during application.
		5. Apply waterproof coating using consistent techniques to achieve uniform thickness, consistent appearance, and uniform color and texture.
		6. Do not thin waterproof coating.

# PROTECTION

* + 1. Protect applied waterproof coating to ensure that, except for normal weathering, coating will be without damage or deterioration at time of Substantial Completion.

# 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.

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