

Sikalastic® HLM 5000 GC – GUIDE SPECIFICATION

SECTION 07 14 16

PART 1 – GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Application of cold fluid-applied waterproofing.
- B. Related Sections:
 - 1. Section 03 30 00 – Cast-In-Place Concrete.
 - 2. Section 04 20 00 – Unit Masonry.
 - 3. Section 07 92 00 – Joint Sealants.

TWO SYSTEMS AVAILABLE; HIGH BUILD VALUES ARE SLIGHTLY DIFFERENT THAN VALUES LISTED BELOW. MODIFY ACCORDINGLY.

1.2 SYSTEM DESCRIPTION

1.3 SUBMITTALS

- A. Comply with Section [01 33 00] [____].
- B. Product Data: Submit manufacturer's technical bulletins and SDS on each product.
- C. LEED Submittals: Comply with requirements for each product to achieve points indicated in LEED Project Checklist provided by the Architect/Engineer.
- D. 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.
- E. Quality Control Submittals:
 - 1. Provide protection plan of surrounding areas.

1.4 QUALITY ASSURANCE

- A. Comply with Section [01 40 00] [____].
- B. Qualifications:
 - 1. Applicator: Minimum of 5 years' experience in application of similar systems and products on projects of similar size and scope.
 - a. Successful completion for a minimum of 5 projects of similar size and complexity to specified Work.
 - 2. Manufacturer Qualifications: Company shall be ISO 9001:2015 Certified.
 - 3. Manufacturer: Minimum 15 years of experience in manufacturing of high build coatings.
- C. Field Sample:

1. Install field sample at project site or pre-selected area of building, minimum 4 feet by 4 feet (1.2 m by 1.2 m), using specified coating 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 written approval of field sample before start of material application, including approval of aesthetics, color, texture and appearance.

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 label intact.
- D. Store tightly sealed coating system materials off ground and away from moisture, direct sunlight, extreme heat and freezing temperatures.
- E. Store in unopened containers in clean, dry conditions at 40 degrees F (4 degrees C) to 80 degrees F (27 degrees C).

1.6 PROJECT CONDITIONS

- A. Environmental Requirements:
 1. Ensure that substrate surfaces are dry, and ambient air temperatures are 40 degrees F (4 degrees C) to 90 degrees F (32 degrees C) 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 coatings if snow, rain, fog, and mist is 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, control joints or other materials that will be affected by solvent.
 4. Avoid application when inclement weather is present or imminent.
 5. Do not apply membrane to reinforcing bars or to wet or contaminated surfaces.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

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

Sika Corporation St. Louis,
 3400 Tree Court Industrial Boulevard,
 St. Louis, MO 63122;
 Phone: 800-325-9504;
 Fax: 800-551-5145;
 E-mail: info@greenstreak.com;
 Website: usa.sika.com

- B. Substitutions: Not permitted.

- C. Specifications and drawings are based on manufacturer's proprietary literature from Sika Corporation. Architect/Engineer will be sole judge of appropriateness of substitutions.

2.2 MATERIALS

- A. A one-component, moisture-curing, bitumen-modified polyurethane, elastomeric waterproofing membrane for exterior below-grade or between slab applications.
1. Acceptable Product: Sikalastic® HLM 5000 GC by Sika Corporation.
- B. Performance Requirements: The following properties are based on product's standard system.
1. Compliances:
 - a. ASTM C836
 - b. National Standard of Canada 37.58 – M86 developed by CGSB.
 2. Minimum Recovery: 90 percent.
 3. Swelling in Water (3 days at room temperature): None.
 4. Service Temperature Range:
 - a. Minimum: Minus 40 degrees F (Minus 40 degrees C).
 - b. Maximum: 120 degrees F (49 degrees C).
 5. Hardness, Shore OO: 85, ASTM C836.
 6. Tensile Strength: 150 psi (1.0 MPa), ASTM D412.
 7. Average Elongation: 600 percent, ASTM D412.
 8. 100% Modulus: 80 psi (0.6 MPa), ASTM D412.
 9. Moisture-Vapor Permeability (dry perms): < 0.1, ASTM E96.
 10. Crack Bridging Test: Passed 1/16 inch (2 mm), ASTM C836.
 11. Extensibility After Heat Aging: No cracking, ASTM C836.
 12. Weight Loss (20 percent maximum): 16 percent, ASTM C836.
- C. Color: Black.

2.3 ACCESSORIES

- A. MasterSeal 995 & MasterSeal 996: A reinforcing fabric is available for high-build systems requiring multiple coats of the Sikalastic® HLM 5000 GC.
- B. MasterSeal 977: A fiberboard sheet impregnated with water repellant material in 50 mils and 120 mils thicknesses.
- C. Sika Drainage Mat 420 / 720 / 1000: Prefabricated drainage composite with high flow dimpled core and high crush resistant geonet constructions.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Comply with Section [01 70 00] [____].

3.2 SURFACE PREPARATION

- A. Lightly steel trowel concrete deck to flat, uniform surface. Light broom finish is acceptable. Properly cure new concrete for a minimum of 72 hours. Mechanically remove concrete curing compounds.
- B. For extremely porous block, apply parge coat of cementitious block filler or prime with a coat of waterproofing membrane diluted up to 25 percent with reducer recommended by membrane manufacturer. Apply

cementitious block filler at a rate of approximately 400 square feet (37 square m) per bag for parge coat. Allow curing minimum of 7 days before applying waterproofing membrane.

- C. Patch voids and deep depressions in substrates with appropriate patching material before applying waterproofing membrane.
- D. Before applying waterproofing membrane, dam drains and drain openings.
- E. Carefully work material over irregular concrete to avoid pinholes and holidays.
- F. Remove dust, dirt and other contaminants just before or during application.
- G. Open air-void pockmarks or honeycombs to allow waterproofing membrane to fill cavities completely. Air entrapment within voids may cause blisters. Extreme cases may require a parge coat.

3.3 PRESTRIPING

- A. Before applying final membrane, seal joints, cracks, and openings around protrusions by caulking or prestripping (a preliminary coating of waterproofing membrane applied with trowel or stiff bristled brush). Allow drying overnight before applying final membrane.
- B. When final membrane is applied, verify overall thickness over joints and cracks, at coves, and around penetrations of approximately 100 wet mils (2.5 mm) on standard system, or approximately 200 wet mils on high build system.
- C. Static Joints and Cracks: Fill joints and cracks less than 1/16 inch (1.6 mm) by prestripping. Apply material so it both fills and overlaps joint or crack to 4-inch (102 mm) width on each side.
- D. Working or Expansion Joints:
 - 1. Seal joints over 1/8 inch (3 mm) with joint sealant. Rout moving joints less than 1/8-inch (3 mm) to 1/8-inch (3 mm) minimum and fill with joint sealant. Prevent waterproofing membrane from adhering to joint sealant, which could cause sealant or membrane failure, by applying coat of wax or PTFE tape over cured sealant and then prestripping.
- E. Metal:
 - 1. Clean metal to bright metal by wire brush or sandblast. Prime with quality rust-inhibiting metal primer before application of waterproofing membrane.
- F. Vent, Drain Pipe, and Post Penetrations:
 - 1. Clean metal surfaces to bright metal and prime with quality rust-inhibiting metal primer. Remove dust, debris, and other contaminants from voids. Seal with appropriate joint sealant.
 - 2. Seal openings exceeding 1/8 inch (3 mm) with joint sealant. Next, prestripe to 4-inch (102 mm) minimum width on base slab and continue up penetration to height of top-course wearing surface.

3.4 APPLICATION

- A. Standard System:
 - 1. For horizontal applications, empty contents of pail and spread immediately to ensure workability. Best results are obtained by marking off 125 square foot (11.61 square m) areas and evenly spreading contents of 5-gallon (18.93 L) unit with rubber-edged notched squeegee. Repeat above procedure until entire surface is covered.
 - 2. For vertical applications, apply roller at rate of 25 square feet per gallon (0.6 square m per L). Best results are obtained by marking off 125 square foot (11.61 square m) areas and evenly applying contents of 5 gallon (18.93 L) pail.

3. Verify applied thickness with wet mil gauge as Work progresses.

B. High-Build System:

1. Concrete Substrate: Apply 60 wet mils (1.5 mm) of waterproofing membrane, followed by setting reinforcing fabric into wet material. Overlap seams 3 inches (76 mm) minimum. Additional material may be required to properly embed reinforcing fabric where it overlaps. Allow first coat to cure overnight and follow with second 60 wet-mil (1.5 mm) application of waterproofing membrane.
2. Plywood Substrate: Comply with APA (American Plywood Association) standards for plywood construction. Seal joints with recommended joint sealant then proceed with waterproofing membrane high-build system.

3.5 INSTALLATION OF PROTECTION COURSE

- A. Install protection layer as soon as possible following cure of membrane. Protect membrane from traffic before placement of protection layer. Ensure waterproofing membrane has cured before installation of topping.

3.6 CURING

- A. Appreciable properties develop within 24 to 48 hours at 75 degrees F (24 degrees C) and 50 percent relative humidity. Protect waterproofing membrane from traffic during curing.
- B. Drainage and Protection:
For protection during backfill and where hydrostatic pressure is anticipated, use appropriate drain board system.
For protection during backfill only, install protection layer as soon as possible following cure of waterproofing membrane.

3.7 FIELD QUALITY CONTROL

- A. Site tests:
Test integrity of cured membrane on horizontal surface by damming entire area and flooding with water to minimum depth of 2 inches (51 mm). Allow water to stand for 24 to 48 hours. Visually inspect bottom surface to check for water penetration. If repairs are necessary, drain area and allow drying before reapplying waterproofing membrane. After reapplication, test area again for membrane integrity. Repeat procedure until no leaks appear in membrane.

3.8 CLEANING AND PROTECTION

- A. Remove temporary coverings and protection from adjacent work areas. Clean up areas not to be coated of over-spray and droppings. Remove construction debris from project site.
- B. Clean tools and equipment immediately after application with manufacturer's recommended cleaning solution.

END OF SECTION

DISCLAIMER:

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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