BUILDING TRUST

PRODUCT DATA SHEET

Sikalastic® HLM 5000 T

(formerly MSeal HLM 5000 T)

LIQUID, COLD-APPLIED ELASTOMERIC WATERPROOFING MEMBRANE SYSTEM

PRODUCT DESCRIPTION

Sikalastic® HLM 5000 T is a trowel grade one-component, moisture-curing, bitumen-modified polyurethane elastomeric waterproofing membrane for exterior below-grade or between-slab applications.

USES

- Concrete
- Plywood (exterior)
- Exterior below grade (on masonry, concrete, and incidental metal)
- Above grade (between two-course concrete and within cavity walls)
- Parking garages and concrete tanks
- Plaza decks and malls
- Fountains and pools
- Balconies and planters
- Below-grade slabs
- Walls and culverts
- Sea walls, dams and reservoirs

CHARACTERISTICS / ADVANTAGES

- Available in standard and high-build systems
- Waterproofing membrane to prevent water penetration
- Elastomeric accommodates expansion and contraction
- Wide service-temperature range, making Sikalastic® HLM 5000 T suitable for all climates
- Chemical resistance to bacterial attack, select acids, alkalis, and salts
- Seamless cold-applied membrane eliminates lapping, seaming, and precutting
- Does not require hot-melt equipment

APPROVALS / STANDARDS

- ASTM C 836
- National standard of Canada 37.58 - M86 developed by CGSB

PRODUCT INFORMATION

Chemical Base	Sikalastic® HLM 5000 T is a bitumen-modified polyurethane.	
Packaging	5 gal (18.95 L) pails	
Shelf Life	▪ Pails:1 Year ▪ Drums: 6 Months	
Storage Conditions	Store in unopened containers in clean, dry conditions at 40 to 80 °F (4 to 27 °C). During storage, an easily removed skin of Sikalastic® HLM 5000 T may form, which does not affect the performance of the product.	
Viscosity	4,000 poise	(Brookfield)

TECHNICAL INFORMATION

Surface hardness	**Shore OO Hardness**		
	High-Build System	Standard System	(ASTM C 836)
	N/A	85	
Impact Strength	**Minimum Recovery**		
	90%		
Tensile Strength	High-Build System	Standard System	(ASTM D 412)
	200 psi (1.4 MPa)	150 psi (1.0 MPa)	
	Average Elongation		
	High-Build System	Standard System	(ASTM D 412)
	300%[1]	600%	
	[1]Tested in the direction of greatest elongation of the fabric		
Tensile Modulus of Elasticity	**100% Modulus**		
	80 psi (0.6 MPa)		(ASTM D 412)
Crack Bridging Ability	High-Build Systems	Standard System	(ASTM C 836)
	Passed ¼"; no loss of bond or or cracking exhibited	Passed 1⁄16"; no loss of bond or cracking exhibited	
	Cycled 10 times per 24 hours at - 15 °F (- 26 °C)		
Adhesion in peel	5 lbs/in (1 lb/in minimum)		(ASTM C 836)
Shrinkage	Standard System		(ASTM C 836)
	16% weight loss		
Thermal Resistance	**Flexibility after heat aging**		
	Standard System		(ASTM C 836)
	No cracking		
Dimensional change after immersion in water	3 days at room temperature: Nil		
Permeability to Water Vapor	High-Build Systems	Standard System	(ASTM E 96)
	0.075 dry perms	0.1 dry perms	

APPLICATION INFORMATION

Coverage	25–30 ft²/gal at 55–65 wet mils (0.61–0.74 m²/L at 1.4–1.7 mm wet thickness) 25–30 ft²/gal at 45–55 dry mils (0.61–0.74 m²/L at 1.1–1.4 mm dry thickness) Coverage may vary with the application technique used. Actual coverage rate and mil thickness depend on the finish and porosity of the substrate.

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

APPLICATION INSTRUCTIONS

- Apply Sikalastic® HLM 5000 T when substrates are dry and air temperatures are 40 to 90 °F (4 to 32 °C); for application at temperatures below 40 °F (4 °C), consult Technical Services.
- Temperatures influence the viscosity and handling characteristics of Sikalastic® HLM 5000 T: heat increases and cold decreases the flow. Keep Sikalastic® HLM 5000 T cool in hot weather and warm in cold weather.
- Avoid application when inclement weather is present or imminent.
- Do not apply to reinforcing bars or to wet or contaminated surfaces.
- Do not directly heat containers with a flame, stove, hot plate, or oven.
- Patch all voids and deep depressions in substrates with appropriate patching material before applying Sikalastic® HLM 5000 T.
- Before applying Sikalastic® HLM 5000 T, dam all drains and drain openings.
- Carefully work material over irregular concrete to avoid pinholes and holidays.
- Protect Sikalastic® HLM 5000 T coated surfaces from a puncture with a protection board until the required topping or backfill is placed.
- Not intended as an exposed or wearing surface.
- Do not use where a solvent odor is objectionable, e.g., near areas where food preparation or processing occurs during the application.
- Specify wet or paper curing for concrete to be coated with Sikalastic® HLM 5000 T; avoid using liquid curing compounds.
- In horizontal applications, concrete must be sloped to drain to avoid ponding water on the surface of Sikalastic® HLM 5000 T
- When using a drainage mat directly over Sikalastic® HLM 5000 T, a layer of 6-mil polyethylene sheeting should be used between the Sikalastic® HLM 5000 T and the drainage mat.

Drainage and Protection

1. For protection during backfill and where hydrostatic pressure is anticipated, use the appropriate Sikaplan®-975 Drain Board System for installation instructions.
2. For protection during backfill only, install the protection board as soon as possible following the cure of Sikalastic® HLM 5000 T.

SUBSTRATE PREPARATION

1. For best results, all concrete deck surfaces should be lightly steel-troweled to a flat, uniform surface. A light broom finish is acceptable. New concrete must be properly water-cured for at least 14 days. Membrane-curing compounds must be mechanically removed.
2. For extremely porous block: Prime with a coat of Sikalastic® HLM 5000 T diluted up to 25% with SikaSwell®-990 or xylene. Or apply a parge coat of Sika Thoroseal®-581 at the rate of approximately 400 ft² (37.2 m²) per bag and allow to cure a minimum of 7 days before applying Sikalastic® HLM 5000 T.
3. Remove dust, dirt, and other contaminants just before or during application. Surfaces must be dry at the time of application.
4. Air-void pockmarks or honeycombs must be opened up to allow Sikalastic® HLM 5000 T to fill the cavities completely. Air entrapment within voids may cause blisters. Extreme cases may require additional repair.

SURFACE PREPARATION

1. Before applying the final membrane, all joints, cracks, and openings around protrusions must be sealed by caulking or prestriping (a preliminary coating of Sikalastic® HLM 5000 T applied with a trowel or stiff-bristled brush). Allow to dry overnight before applying the final membrane.
2. When the final membrane is applied, the overall thickness over joints and cracks, at coves, and around penetrations should be approximately 100 wet mils (2.5 mm) on the standard system.

Static Joints And Cracks

Joints and cracks less than 1⁄16" (1.6 mm) should be filled by prestriping. Apply material so it both fills and overlaps the joint or crack to a width of 4" (102 mm) on each side.

Working Or Expansion Joints

All joints over 1⁄8" (3 mm) must be sealed with a Sika urethane sealant. Any working joint less than 1⁄8" (3 mm) should be routed to a minimum of 1/4" (6 mm) and filled with a sealant. Prevent the waterproofing membrane from adhering to the joint sealant, which could cause sealant or membrane failure, by applying a coat of wax or bond breaker tape over the cured sealant and then prestriping.

Uncoated Metal Surfaces

Remove dust, debris, and any other contaminants from the vent, drain pipe, post penetrations, reglets, and other metal surfaces. Clean surfaces to near white per SSPC-NACE2 and prime immediately with Sika® Primer-173. Provide appropriate cant with Sikaflex® NP 1 or Sikaflex® NP 2 sealants to eliminate 90° angles.

Vent, Drain Pipe, And Post Penetrations

Clean metal surfaces to bright metal and prime with a quality rust-inhibiting metal primer followed by Sika® Primer-173 or Sika® Primer-176. Remove dust, debris, and any other contaminants from voids. Seal with the appropriate sealant.

APPLICATION

A test application is always recommended before proceeding with the entire application.
NOTE: Finish coat must be applied in a pinhole-free, continuous membrane for waterproofing integrity.

Standard System

1. Select the grade of Sikalastic® HLM 5000 that best meets individual job requirements. Use Sikalastic® HLM 5000 T for trowel application, Sikalastic® HLM 5000 S for spray application, or Sikalastic® HLM 5000 SL for squeegee application.
2. For horizontal applications, empty the contents of the pail and spread immediately to ensure workability. The best results are obtained by marking off 125 ft² (11.61 m²) areas and evenly spreading the contents of a 5-gallon (18.93 L) unit with a rubber-edged notched squeegee. Repeat the above procedure until the entire surface is covered.
3. For vertical applications, apply by trowel, roller, or spray at the rate of 25 ft²/gallon (0.6 m²/L). The best results are obtained by marking off 125 ft² (11.6 m²/L) and evenly applying the contents of a 5-gallon (18.93 L) pail.
4. Verify the applied thickness with a wet mil gauge as the work progresses.
5. The integrity of the cured membrane on a horizontal surface may be verified by damming the entire area and flooding it with water to a minimum depth of 2" (51 mm) and allowing the water to stand for 24–48 hours. Visually inspect the bottom surface to check for any water penetration. If repairs are necessary, the area should be drained and allowed to dry before reapplying Sikalastic® HLM 5000 T. After reapplication, the area should be tested again for membrane integrity.

High-Build System

Concrete application: Apply 60 wet mils of Sikalastic® HLM 5000 T, followed by setting Sikalastic®-995 reinforcing fabric into the wet material. Overlap all seams a minimum of 3" (76 mm). Additional material may be required to properly embed the reinforcing fabric where it overlaps. Allow the first coat to cure overnight and follow with a second 60 wet-mil application of Sikalastic® HLM 5000 T.
Plywood application: All plywood construction must comply with APA (American Plywood Association) standards. Caulk all joints with a Sika sealant and then proceed with the Sikalastic® HLM 5000 T high-build system.

Spray Equipment

For spray equipment recommendations, consult the equipment manufacturer.

CURING TREATMENT

Appreciable properties develop within 24–48 hours at 75 °F (24 °C) and 50% relative humidity. Protect Sikalastic® HLM 5000 T from traffic during curing.

LEGAL DISCLAIMER

- **KEEP CONTAINER TIGHTLY CLOSED**
- **KEEP OUT OF REACH OF CHILDREN**
- **NOT FOR INTERNAL CONSUMPTION**
- **FOR INDUSTRIAL USE ONLY**
- **FOR PROFESSIONAL USE ONLY**

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates (“SIKA”), the user must always read and follow the warnings and instructions on the product’s most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA’s Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or 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 product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

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