

PRODUCT DATA SHEET

Sikalastic® HLM 5000 R SL

(formerly MSeal HLM 5000 R)

Self-levelling, Liquid cold-applied waterproofing membrane system

DESCRIPTION

Sikalastic® HLM 5000 R SL is a single component, moisture curing, pure polyurethane based waterproofing membrane that cures by reaction with atmospheric moisture to form a tough membrane.

Sikalastic® HLM 5000 R SL protects structures from water penetration while remaining flexible to handle the nominal expansion and contraction of substrates.

- VOC Emission by following CDPH/EHLB/Standard Method Version 1.2 - California Specification, report No. 24436443a 001
- Water vapor transmission and water vapor permeability per ASTM E 96
- Root resistant CEN/TS 14416:2014

USES

Waterproofing for

- Flat and slope concealed roof structures
- For podium and green roof
- Balconies, planter box and parking garages
- Above grade between two courses of concrete or masonry of cavity wall
- Exterior below grade on concrete and masonry

FEATURES

- Waterproof - Protects structure from water penetration
- Elastomeric - Permits nominal expansion and contraction of the structure
- Low Temperature Flexibility – Wide service temperature, suitable for all climates
- Single Component – No complex mixing & easy to use
- Cold Applied & Seamless – Eliminates lapping, seaming and precutting
- Root resistant - Suitable for planter box and green roof

CERTIFICATES AND TEST REPORTS

- Comply with ASTM C 836, among that crack bridge test temperature adjusted at -20°C;
- VOC report by following ISO 11890-2;

PRODUCT INFORMATION

Composition	Aromatic polyurethane		
Packaging	22.5 kg in big open mouth pail 25 kg in small open mouth pail		
Colour	Black color		
Shelf life	9 months from date of production		
Storage conditions	The Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +35 °C. Always refer to packaging. Refer to the current Safety Data Sheet for information on safe handling and storage.		
Density	~ 1.55 kg/L		
Volatile organic compound (VOC) content	116 g/L		ISO 11890-2:2013
Solid content by mass	≥ 88%		
Shore A hardness	62		ASTM D 2240:2015
Tensile strength	≥2.0 MPa		ASTM D 412:2016
Tensile strain at break	≥ 500%		ASTM D 412:2016
Tensile adhesion strength	≥ 1.2 MPa (self-primer on standard concrete)		ASTM D 7234:2021
Tear strength	≥ 15 N/mm		ASTM D 624:2020
Crack bridging ability	Pass 3.2mm at -20°C for 10 cycles		ASTM C 1305:2016
Permeability to water vapour	0.058 ng/m/sec/pa		ASTM E 96:2016
Water-vapour transmission rate	8.67 g/m ² /day		ASTM E 96:2016
Watertightness	0.30 MPa, no penetration		ASTM D 5385:2014
Water absorption	≤5%		ASTM D 570:1998
Flexibility at low temperature	No crack at -35°C		ASTM D 1970:2021
Material temperature	Minimum	5 °C	
	Maximum	35 °C	
Ambient air temperature	Minimum	5 °C	
	Maximum	40 °C	
Relative air humidity	Minimum	20%	
	Maximum	85%	
Dew point	Beware of condensation. Substrate temperature during application must be at least +3 °C above dew point.		
Substrate temperature	Minimum	5 °C	
	Maximum	35 °C	
Substrate moisture content	Substrate	Test Method	Moisture Content
	Cementitious Substrate	Calcium carbide method (CM-method)	≤ 4 % (for self - primer) Or refer to selected approved primer PDS
No rising moisture (ASTM D4263, polyethylene sheet) The substrate must be visibly dry with no standing water.			

Waiting time to overcoating

Ambient temperature	Relative humidity	Minimum
+10 °C	50 %	24 h
+20 °C	50 %	12 h
+30 °C	50 %	8 h

Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.

System structure

Waterproofing without Reinforcement system

Layer	Product	Consumption
Primer	Sikalastic® HLM 5000 R SL with 5% Sika® Thinner C or local approved primer	~0.3 kg/m ²
1st layer	Sikalastic® HLM 5000 R SL	1.0~1.2 kg/m ²
2nd layer	Sikalastic® HLM 5000 R SL	0.7~1.0 kg/m ²
Layer Thickness		1.15 ~ 1.45 mm

Waterproofing with Reinforcement system

Layer	Product	Consumption
Primer	Sikalastic® HLM 5000 R SL with 5% Sika® Thinner C or local approved primer	~0.3 kg/m ²
1st layer	Sikalastic® HLM 5000 R SL	1.0~1.2 kg/m ²
Reinforcement	Sikafleece-80 or local approved Reinforcement	
2nd layer	Sikalastic® HLM 5000 R SL	0.7~1.0 kg/m ²
Layer thickness		1.2 ~ 1.5 mm

Note 1: Use reinforcement in localised areas for all joints, areas subject to differential movement, guttering or drainage channels.

Note 2: Consumption data is theoretical and does not consider any additional material due to surface porosity, surface profile, variations in level, wastage or any other variations. Apply product to a test area to calculate the exact consumption for the specific substrate conditions and proposed application equipment.

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

EQUIPMENT

Select the most appropriate equipment for all applica-

tions required for the project.

SUBSTRATE PREPARATION EQUIPMENT

- Grinding equipment
 - Manual or mechanical wire brushes
 - High-pressure power washer
 - Industrial vacuuming equipment
- For other types of preparation equipment, contact Sika Technical Services.

MIXING EQUIPMENT

- Electric single-paddle mixer (300 to 400 rpm)

APPLICATION EQUIPMENT

- Trowl
- Brush
- Airless spray equipment

SUBSTRATE PREPARATION

Penetrations and structural joints

Sika Joint Sealing Solutions must be used for connections around penetrations and for construction joints.
CONCRETE OR CEMENTITIOUS SCREEDS

1. Substrate must be sound with a minimum tensile adhesion strength of 1.2 N/mm², clean, dry and free of all contaminants such as dirt, oil, grease, coatings, laitance, surface treatments and loose friable material.
2. New concrete must be cured for at least 28 days and have a tensile strength > 1.2 N/mm².
3. **IMPORTANT** The final texture of the substrate must be open-textured and gripping. Prepare cementitious substrates mechanically using abrasive blast cleaning, planing or scarifying equipment to remove cement laitance.
4. Remove weak concrete and fully expose defects such as blow holes and voids. Note Suitable methods for surface preparation are high-pressure water jetting or abrasive blast cleaning. If using other pre-treatments such as scarifying and milling, subsequently use water jetting or blast cleaning to eliminate the remaining structural faults, remove cement laitance, and achieve an open and sound textured surface.
5. Repair and fill blow holes and voids using appropriate products from the SikaTop[®], Sika MonoTop[®], Sika-floor[®], Sikadur[®] and Sikagard[®] range of materials.
6. Remove dust by industrial vacuuming equipment.
7. To confirm adequate surface preparation and adhesion of the Product, carry out a small trial before full application together with adhesion tests as required.

MIXING

IMPORTANT

The Product is supplied ready to use.

Prior to application mix for at least 2 minutes using an electric single-paddle mixer (300 to 400 rpm) until the liquid and all coloured pigment has achieved a uniform colour.

APPLICATION

Strictly follow installation procedures

Strictly follow installation procedures as defined in Method Statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

COATING

Always begin application with detailing (corners, up-stands, joints) before installation of the main horizontal surfaces.

1. Apply Sikalastic[®] HLM 5000 R SL as self-primer evenly over the surface with trowel or airless spray equipment first then roller to evenly. If taking other primer please follow application guidance.
2. Apply first layer bodycoat in trowel or airless spray

equipment. Note Maintain a "wet edge" during application to achieve a seamless finish.

3. For reinforced membrane lay the Sika[®] Reinforcement onto the wet base coat. Note The reinforcement fibres must be fully encapsulated within the base coat.
4. Within overcoating time, apply second layer of the product evenly over the surface with trowel or airless spray equipment. Note Maintain a "wet edge" during application to achieve a seamless finish.

5. The coating must be continuous, pore free and to the required surface finish.

Protect from rain

After application, protect the Product from heavy rain or rain showers until dry to prevent surface damage.

No application on rising moisture

Do not apply on substrates with rising moisture.

CLEANING OF EQUIPMENT

Clean all tools and application equipment with Sika[®] Thinner C immediately after use. Hardened material can only be removed mechanically.

LEGAL NOTES

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.

Sika (Thailand) Limited

700/37 Moo 5 Amata City Chonburi
Industrial Estate, T. Klong Tamhru
A. Muang, Chonburi 20000, Thailand
Tel : +66 3810 9500
E-mail : sikathai@th.sika.com
Website: tha.sika.com



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