

PRODUCT DATA SHEET

Sikalastic®-510 BH

ACRYLIC LIQUID APPLIED ROOF WATERPROOFING SOLUTION

DESCRIPTION

Sikalastic®-510 BH is a cold-applied, one-component waterborne liquid applied waterproofing membrane, highly elastic and UV-resistant. Suitable for use in hot climatic conditions.

USES

- For exposed roof waterproofing solutions in both new construction and refurbishment projects
- For exposed roofs with many details and complex geometry when accessibility is limited
- Waterproofing underneath screeds in wet rooms
- For reflective coating to enhance energy efficiency by reducing cooling costs

CHARACTERISTICS / ADVANTAGES

- UV resistant and resistant to yellowing and weathering
- Highly elastic and crack-bridging
- One component - ready to use
- Excellent adhesion on porous and non-porous substrates
- Seamless, fully bonded waterproofing membrane
- Water vapour permeable

PRODUCT INFORMATION

Composition	Acrylic Dispersion
Packaging	20 kg plastic pails
Colour	White, liquid form
Shelf life	12 months minimum from date of production if stored properly in original, unopened and undamaged sealed packaging.
Storage conditions	Store in dry conditions in original packaging at temperatures between +5 °C and +30 °C. Protect from direct sunlight and frost.
Density	~1.24 kg/l (ISO 2811)
Solid content by weight	~55 %
Solid content by volume	~44 %

TECHNICAL INFORMATION

Tensile Strength	Free film: ~1.8 N/mm ² (28 d / 23°C)	(ASTM D 638)
Elongation at Break	Free film: ~72 % (28 d / 23°C)	(ASTM D 638)
Tensile Adhesion Strength	~1.8 N/mm ² (28 d / 23°C)	(ASTM C 1583)

Water Absorption	Depth of penetration of water under pressure: ~3 mm (28 d / 23 °C)	(EN 12390-8)
Service Temperature	-5 °C min. / +80 °C max.	

SYSTEMS

System Structure	Build up:	Sikalastic®-510 BH (applied in minimum of 2 coats)
	Substrates:	Cementitious, brick, stone
	Primer:	Please refer to related chapter
	Dry film thickness:	Minimum 0.35 mm, depending on application field, project specification and relevant standards
	Total consumption:	Minimum 1.0 kg/m ² , depending on application field and project specification

Attention: Do not apply more than 0.8 kg/m² Sikalastic®-510 BH per coat for layers without reinforcement.

APPLICATION INFORMATION

Ambient Air Temperature	+8 °C min. / +40 °C max.
Relative Air Humidity	80 % max.
Substrate Temperature	+8 °C min. / +40 °C max.
Dew Point	Beware of condensation. Surface temperature during application must be at least +3 °C above dew point.
Substrate Moisture Content	< 6 % moisture content. No rising moisture according to ASTM (Polyethylene-sheet). No water / moisture / condensation on the substrate.

Substrate Pre-Treatment

Substrate	Primer	Consumption [kg/m ²]
Cementitious substrates, brick and stone	Sikalastic®-510 BH diluted with 10 % water.	~0.3

These figures are theoretical and do not include for any additional material required due to surface porosity, surface profile, variations in level and wastage etc.

Waiting Time / Overcoating

Before applying Sikalastic®-510 BH on primer Sikalastic®-510 BH diluted with 10 % water:

Substrate Temperature	Relative humidity	Minimum	Maximum ¹⁾
+10 °C	50 %	~4 h	1 month
+20 °C	50 %	~2 h	1 month
+30 °C	50 %	~1 h	1 month

Before applying the base coat of Sikalastic®-510 BH on the second coat of Sikalastic®-510 BH allow intermediate coats to fully cure

Substrate Temperature	Relative humidity	Minimum	Maximum ¹⁾
+10 °C	50 %	~8 h	3 months
+20 °C	50 %	~6 h	3 months
+30 °C	50 %	~4 h	3 months

¹⁾ Assuming that all dirt has been removed and intercoat contamination is avoided.

Note: Times are approximate and will be affected by coating thickness and changing ambient conditions particularly temperature and relative humid-

ity. Low temperature and high humidity retard curing, while high temperatures and low humidity accelerate curing progression. The above times are based on a coating thickness of 0.4 kg/m².

Applied Product Ready for Use	Substrate Temperature	Relative humidity	Touch dry	Rain, water & condensation resistant	Full cure
	+10 °C	50 %	~4 h	~12 h	~6 d
	+20 °C	50 %	~2 h	~8 h	~4 d
	+30 °C	50 %	~1 h	~4 h	~2 d

Note: Times are approximate and will be affected by coating thickness and changing ambient conditions particularly temperature and relative humidity. Low temperature and high humidity retard curing, while high temperatures and low humidity accelerate curing progression. The above times are based on a coating thickness of 0.4 kg/m².

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

All substrates must be prepared using abrasive blast cleaning, scarifying equipment or other suitable mechanical methods and cleaned using high pressure water jet.

Cementitious substrates:

New concrete should be cured for at least 28 days and should have a pull-off strength ≥ 1.5 N/mm². Loose friable material and weak concrete must be completely removed by mechanical means to achieve an open textured surface and all surface defects such as blowholes and voids must be fully exposed. Repairs to the substrate, filling of joints, blowholes/voids and surface leveling must be carried out using the appropriate Sika® products. Refer to Sika's Technical Department for further advice. High spots must be removed by for example grinding. Outgassing is a naturally occurring phenomenon of concrete that can produce pinholes in subsequently applied coatings. The concrete must be carefully assessed for moisture content, air entrapment, and surface finish prior to any coating work. Installing the Sikalastic®-510 BH either when the concrete temperature is falling or stable can reduce outgassing. Prime the substrate before applying the Sikalastic®-510 BH systems.

Brick and stone:

Mortar joints must be sound and flush pointed. Use localised reinforcement over connection joints and prime before applying Sikalastic®-510 BH.

For other substrates please contact Sika Technical Department.

MIXING

Prior to application, stir Sikalastic®-510 BH thoroughly for 1 minute in order to achieve a homogeneous mixture using a slow speed (300 - 500 rpm) drill and basket type paint mixer. Over mixing must be avoided to minimise air entrainment.

APPLICATION

Prior to the application of Sikalastic®-510 BH the priming coat must have cured tack-free. Protect adjacent

areas from splashes, over painting, damage etc. with an adhesive tape or plastic. Sikalastic®-510 BH is applied in 2 – 6 coats as per the required system thickness. Prior to the application of each coat the indicated waiting times must be followed.

Sikalastic® Flexitape Heavy or Sika® Reemat Premium is applied at areas having high movements, irregular substrate or to bridge cracks, joints and seams on the substrate. Please note, always begin with detailing works prior to waterproofing the horizontal surface. Tools: High Pressure Jet Washer (minimum 150 bar): If dust, vegetation, moss / algae or other contaminants are present on the existing roof, a power washer is required to clean the substrate prior to the application of Sikalastic®-510 BH. Existing chippings should be removed by hand or scabbling prior to power washing. Squeegee: Useful when removing excess water from the roof after overnight rain. Drill and paddle: Sikalastic®-510 BH should be mixed for one minute using a slow speed (300-500 rpm) drill and basket type paint mixer. Solvent resistant short-piled roller: Used in the application of Sikalastic®-510 BH to ensure a consistent thickness of the seamless Sikalastic®-510 BH. Thick hair brush: For application of Sikalastic®-510 BH to all details and penetrations.

CLEANING OF EQUIPMENT

Clean all tools and application equipment with water immediately after use. Hardened / cured material can only be removed mechanically.

IMPORTANT CONSIDERATIONS

Do not apply Sikalastic®-510 BH on substrates that have rising moisture. Always apply during falling ambient and substrate temperature. If applied during rising temperatures "pin holing" may occur from rising and expanding air. Sikalastic®-510 BH may be flood tested when fully cured using 50 millimeter depth of water for a maximum period of 24 hours. Ensure that each coat of Sikalastic®-510 BH is totally dry and the surface is without pinholes before applying further coats.

Do not apply Sikalastic®-510 BH if inclement weather such as rain, fog or extreme humidity (80 % maximum) causing condensation is expected. Ensure that the ap-

plied Sikalastic®-510 BH has sufficient curing time (see curing times above) before any such inclement weather is expected. Do not allow temporary ponding or moisture (Dew, Condensation etc.) to remain between coats on any horizontal surfaces or until the final coating has totally cured. Brush or mop surface water away during this time. It is recommended to carry out Adhesion and Compatibility tests with the Primer prior to application of following coats. Sikalastic®-510 BH should not be applied on areas subject to long-term ponding water. In cold climatic zones for Roofing structures with a pitch of less than 3 % appropriate drainage measures must have to be considered.

If aesthetics are important and normal drying times are to be achieved, do not apply Sikalastic®-510 BH top coats with consumption rates greater than 0.8 kg/m². Do not apply Sikalastic®-510 BH directly on insulation boards. Sikalastic® Flexitape Heavy or Sika® Reemat Premium can be applied at areas with high movements, irregular substrate or to bridge cracks, joints and seams on the substrate as well as for details. Sikalastic® Flexitape Heavy or Sika® Reemat Premium can be used as total reinforcement or for partial reinforcements over dynamic cracks and joints. Sikalastic®-510 BH is not recommended for pedestrian traffic. In case pedestrian traffic is unavoidable, Sikalastic®-510 BH shall be covered with appropriate paving materials.

Do not apply cementitious products for example tile adhesives directly onto Sikalastic®-510 BH, contact Sika Technical Department for more information. Sikalastic®-510 BH is to be used mainly in exposed applications and is not for inverted buried roofing systems. Sikalastic®-510 BH should not be subject to permanent water immersion. Whilst Sikalastic®-510 BH is resistant to most commonly encountered atmospheric pollutants, propriety cleaning solutions and environmental spoilage, the suitability of the product for use in applications with increased chemical resistance requirements should first be established in consultation with our Technical Department. Overcoating Sikalastic®-510 BH after 3 months exposure, requires adhesion tests.

BASIS OF PRODUCT DATA

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

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product

SIKA NORTHERN GULF

Bahrain / Qatar / Kuwait
Tel: +973 177 38188
sika.gulf@bh.sika.com
gcc.sika.com

SIKA SOUTHERN GULF

UAE / Oman / SIC
Tel: +971 4 439 8200
info@ae.sika.com
gcc.sika.com

may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

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.



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All products are supplied under a management system certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and OHSAS 18001.

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