

## PRODUCT DATA SHEET

# Sikalastic®-501 Roofseal Plus

### ECONOMICAL LIQUID APPLIED ROOF WATERPROOFING SOLUTION

#### DESCRIPTION

Sikalastic®-501 Roofseal Plus is a cold-applied, one-component waterborne liquid applied waterproofing membrane, highly elastic and UV resistant.

#### USES

- For roof waterproofing solutions in both new construction and refurbishment projects
- For roofs with many details and complex geometry when accessibility is limited
- For cost efficient life cycle extension of failing roofs
- For reflective coating to enhance energy efficiency by reducing cooling costs

#### CHARACTERISTICS / ADVANTAGES

- One-component - ready to use
- Cold applied - requires no heat or flame
- Seamless waterproofing membrane
- UV resistant and UV stable
- Highly elastic and crack-bridging
- Easily recoated when needed - no stripping required
- Economic – provides a cost efficient life cycle extension for failing roofs
- Low VOC emitting water-based coating
- Excellent adhesion on porous and non-porous substrates
- Water vapour permeable - allows the substrate to breathe

#### PRODUCT INFORMATION

<b>Chemical base</b>	Modified acrylic dispersion
<b>Packaging</b>	4 kg, 20 kg / pails
<b>Colour</b>	Grey, White and Green
<b>Shelf life</b>	12 months from date of production.
<b>Storage conditions</b>	The product must be stored properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C.
<b>Density</b>	~1.35 kg/l (+23 °C)
<b>Solid content by weight</b>	~65 % (+23 °C / 50 % r.h.)
<b>Solid content by volume</b>	~48 % (+23 °C / 50 % r.h.)

## TECHNICAL INFORMATION

Service Temperature	<b>With Fleece</b>	<b>Without Fleece</b>
	-10 °C min. / +80 °C max.	-5° C min. / +80 °C max.

## SYSTEMS

### System Structure

#### Roof Coating\*

Sikalastic®-501 Roofseal Plus is applied in 2 or 3 coats

Total consumption  $\geq 0.7 - 1.4 \text{ kg/m}^2$  ( $\geq 0.5 - 1.0 \text{ l/m}^2$ )

Dry film thickness  $\geq 0.3 - 0.5 \text{ mm}$

\*For partial reinforcement Sikalastic® Fleece is applied at areas with high movement, irregular substrate or to bridge cracks, joints and seams on the substrate as well as for details. On bitumen felt a fully reinforced roof waterproofing system has to be applied.

For primer, please refer to the Substrate Pre-Treatment table below.

#### Reinforced Roof Waterproofing

Sikalastic®-501 Roofseal Plus is applied in 1 coat, reinforced with Sikalastic® Fleece and sealed with 1 - 2 coats of Sikalastic®-501 Roofseal Plus.

Layer	Product	Consumption
1. Primer	please refer to substrate pre-treatment	please refer to substrate pre-treatment
2. Base coat	Sikalastic®-501 Roofseal Plus	$\geq 1.0 - 1.5 \text{ kg/m}^2$ ( $\geq 0.75 - 1.1 \text{ l/m}^2$ )
3. Reinforcement	Sikalastic® Fleece	-
4. Top coats	Sikalastic®-501 Roofseal Plus applied in 1-2 coats	$\geq 1.1 - 1.3 \text{ kg/m}^2$ ( $\geq 0.8 - 0.95 \text{ l/m}^2$ )

Note: Do not apply more than 0.75 kg/m<sup>2</sup> of Sikalastic®-501 Roofseal Plus per coat for layers without reinforcement.

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

## APPLICATION INFORMATION

Ambient Air Temperature	+8 °C min. / +35 °C max.
Relative Air Humidity	80 % r.h. max.
Substrate Temperature	+8 °C min. / +35 °C max. $\geq 3 \text{ °C}$ above dew point
Substrate Moisture Content	$\leq 6 \text{ % pbw}$ No rising moisture according to ASTM (Polyethylene-sheet).

**Substrate Pre-Treatment**

<b>Substrate</b>	<b>Primer</b>	<b>Consumption (kg/m<sup>2</sup>)</b>
Cementitious substrate	Sikalastic®-501 Roofseal Plus diluted with 10 % water.	~0.3
Brick and stone	Sikalastic®-501 Roofseal Plus diluted with 10 % water.	~0.3
Ceramic tiles (un-glazed)	Sikalastic®-501 Roofseal Plus diluted with 10 % water.	~0.3
Bituminous felt	Only required for high reflectivity applications (Sikalastic® Metal Primer)* Fully reinforced system only	~0.2
Bituminous coatings	Only required for high reflectivity applications (Sikalastic® Metal Primer)* Fully reinforced system only	~0.2
Wooden substrates	Timber based roof decks require a complete layer of Sikalastic® Carrier. For exposed timber upstands use Sikalastic®-501 Roofseal Plus diluted with 10 % water.	~0.3
Paints	Subject to adhesion and compatibility test	

\* Sikalastic® Metal Primer prevents migration of bituminous volatiles and improves long-term reflectivity.

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

For the Waiting Time / Overcoating, please refer to the PDS of the appropriate cleaner and primer. Other substrates must be tested for their compatibility. If in doubt, apply a test area first.

<b>Waiting Time / Overcoating</b>	<b>Waiting time with Sikalastic® Fleece</b>	<b>Waiting time without Sikalastic® Fleece</b>	<b>Ambient condition</b>
	24 hours	6 hours	+20 °C / 50 % r.h.
	12 hours	4 hours	+30 °C / 50 % r.h.

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

<b>Applied Product Ready for Use</b>	<b>Touch dry</b>	<b>Rain resistant</b>	<b>Full cure</b>	<b>Ambient condition</b>
	2 hour approx.	8 hour approx.	4 hour approx.	+20 °C / 50 % r.h.
	1 hour approx.	4 hour approx.	2 hour approx.	+30 °C / 50 % r.h.

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

# APPLICATION INSTRUCTIONS

## SUBSTRATE PREPARATION

The surface must be sound, of sufficient strength, clean, dry and free of dirt, oil, grease and other contamination. Depending on the material the substrate must be primed or mechanically cleaned. Grinding may be necessary to level the surface. Suitable substrates are such as: concrete, bituminous felts and coatings, brickwork, asbestos cement, ceramic tiles, wooden substrates.

## MIXING

Prior to application, stir Sikalastic®-501 Roofseal Plus thoroughly for 1 minute in order to achieve a homogeneous mixture. Over mixing must be avoided to minimise air entrainment.

## APPLICATION

Prior the application of Sikalastic®-501 Roofseal Plus the priming coat if used must have cured tack-free. For the Waiting Time / Overcoating please refer to the PDS of the appropriate primer. Damageable areas (door frame) have to be protected with an adhesive tape.

**Roof Coating** : Sikalastic®-501 Roofseal Plus is applied in two or three coats. Prior to the application of a 2<sup>nd</sup> coat the indicated waiting time in the table above shall be allowed.

**Roof Waterproofing** : Sikalastic®-501 Roofseal Plus is applied in combination with Sikalastic® Fleece.

1. Apply first coat of appr. 0.75 kg/m<sup>2</sup> (for non-absorbing substrates) – 1.00 kg/m<sup>2</sup> (for absorbing substrates) of Sikalastic®-501 Roofseal Plus on a length of approx. 1m.
2. Roll in the Sikalastic® Fleece and ensure that there are no bubbles or creases. Overlapping of the fleece minimum 5 cm.
3. Apply second coat of approx. 0.25 kg/m<sup>2</sup> - 0.5kg/m<sup>2</sup> coat right into the wet fleece to achieve the required film thickness. The entire application shall happen while Sikalastic®-501 Roofseal Plus is still liquid, wet in wet.
4. Repeat step 1–3 until the roof area is waterproofed.
5. After the two coats are dry, seal the roof area with one or more additional coats of Sikalastic®-501 Roofseal Plus (≥ 0.5 kg/m<sup>2</sup> per coat).

Please note, always begin with details prior starting with waterproofing the horizontal surface.

## CLEANING OF TOOLS

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

## LIMITATIONS

- Do not apply Sikalastic®-501 Roofseal Plus on substrates with rising moisture.
- Sikalastic®-501 Roofseal Plus is not suitable for permanent water immersion.
- On substrates likely to exhibit outgassing, apply during falling ambient and substrate temperature. If applied during rising temperatures “pin holing” may occur from rising air.
- Ensure that temperature does not drop below 8 °C and that relative humidity does not exceed 80 % until the membrane has fully cured.
- Sikalastic®-501 Roofseal Plus should not be applied on roofs subject to long-term ponding water.
- Sikalastic®-501 Roofseal Plus should not be applied on roofs subject to ponding water with subsequent periods of frost. In cold climatic zones for roofing structures with a pitch of less than 3 % appropriate measures must be considered.
- Sikalastic®-501 Roofseal Plus applied on roofs subject to long-term freezing at temperature around the minimum service temperature of -10 °C should always be reinforced with Sikalastic® Fleece in order to guarantee sufficient crack-bridging ability.
- Do not apply Sikalastic®-501 Roofseal Plus directly on insulation boards. Instead use a separation layer between insulation board and Sikalastic®-501 Roofseal Plus.
- Sikalastic®-501 Roofseal Plus is not recommended for pedestrian traffic. In case pedestrian traffic is unavoidable, Sikalastic®-501 Roofseal Plus shall be covered with appropriate elements such as tiles, stone plates or wooden panels.
- Do not apply cementitious products (e.g. tile mortar) directly onto Sikalastic®-501 Roofseal Plus. Use an alkaline barrier, for example kiln dried quartz sand.

## 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.

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

## 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 Material Safety Data Sheet 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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