

PRODUCT DATA SHEET

Sikalastic®-501 Roofseal Plus

POLYURETHANE FLEXIBLE ROOF WATERPROOFING SOLUTION WITH IMPROVED PONDING WATER CAPABILITY

DESCRIPTION

Sikalastic®-501 Roofseal Plus is a cold-applied, one component polyurethane modified dispersion with improve ponding water capability, 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

CHARACTERISTICS / ADVANTAGES

- One-component and ready to use
- Cold applied - requires no heat or flame
- Seamless waterproofing membrane
- UV resistant
- Highly elastic
- 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

| | |
|--------------------------------|--|
| Composition | Polyurethane modified dispersion |
| Packaging | 4 kg, 20 kg / pails |
| Colour | Grey, White and Green |
| Shelf life | 12 months from date of production. |
| Storage conditions | The product must be stored properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. |
| Density | ~1.30 kg/l (+25 °C) |
| Solid content by mass | ~63 % (+25°C / 50 % r.h.) |
| Solid content by volume | ~48 % (+25°C / 50 % r.h.) |

TECHNICAL INFORMATION

| | |
|---------------------------|---|
| Tensile strength | >1.5 N/mm ² (at break) |
| Tensile strain at break | 350% |
| Tensile adhesion strength | >0.5 N/mm ² (adhesion to concrete) |
| Service temperature | -10 °C min. / +80 °C max. |

SYSTEMS

System structure

Roof Coating*

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

| | |
|--------------------|-------------------------------|
| Total consumption | ≥ 1.4 - 2.1 kg/m ² |
| Dry Film Thickness | ≥ 0.5 - 0.8 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.

*For primer, please refer to substrate

Roof Reinforcement

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

| | |
|--------------------|-------------------------------|
| Total Consumption | ≥ 2.1 - 2.8 kg/m ² |
| Dry Film Thickness | ≥ 0.9 - 1.1 mm |

| Layer | Product | Consumption |
|------------------|--|---|
| 1. Primer | please refer to substrate pre-treatment | please refer to substrate pre-treatment |
| 2. Base coat | Sikalastic®-501 Roofseal Plus | ≥ 0.7 - 1.0 kg/m ² per coat |
| 3. Reinforcement | Sikalastic® Fleece | - |
| 4. Base coat | Sikalastic®-501 Roofseal Plus | ≥ 0.3 - 0.5 kg/m ² per coat |
| 5. Top coats | Sikalastic®-501 Roofseal Plus applied in 1-2 coats | ≥ 0.6 - 0.7 kg/m ² per coat |

Note:

1. Do not apply more than 0.75 kg/m² of Sikalastic®-501 Roofseal Plus per coat for layers without reinforcement.

2. 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 | +10°C min. / +40°C max. |
| Relative air humidity | 5% min./ 80 % r.h. max. |
| Substrate temperature | +5°C min. / +60°C max. ≥3 °C above dew point |
| Substrate moisture content | ≤ 6 % pbw No rising moisture according to ASTM (Polyethylene-sheet). |

Substrate pre-treatment

| Substrate | Primer | Consumption (kg/m ²) |
|--------------------------|--|----------------------------------|
| 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 (unglazed) | Sikalastic®-501 Roofseal Plus diluted with 10 % water. | ~0.3 |

* 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.

Waiting time to overcoating

| Waiting time with Reinforcement | Waiting time without Reinforcement | Ambient condition |
|---------------------------------|------------------------------------|--------------------|
| 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.

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.

IMPORTANT CONSIDERATIONS

- 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 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.

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.

APPLICATION INSTRUCTIONS

EQUIPMENT

Select the most appropriate equipment require for the project.

- Brush : Soft bristle brush
- Roller : "non-fuzzy" roller
- Airless spray

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, brickwork, asbestos cement, ceramic tiles.

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 : Apply the primer follow the substrate pre-treatment table.

1. Apply first coat around 0.7 kg/m² of Sikalastic®-501 Roofseal Plus.
2. Leave it dry follow the waiting time / overcoating table.
3. Apply the top coat with one or more additional coat of Sikalastic®-501 Roofseal Plus around 0.7 kg/m² per coat and leave it dry.

Roof Reinforcement : Sikalastic®-501 Roofseal Plus is applied in combination with Sikalastic® Fleece. Apply the primer follow the substrate pre-treatment table.

1. Apply first base coat around 0.7-1.0 kg/m² of Sikalastic®-501 Roofseal Plus.
2. Roll in the Sikalastic® Fleece and ensure that there are no bubbles or creases. Overlapping of the reinforcement minimum 5 cm.
3. Apply additional base coat of Sikalastic®-501 Roofseal Plus around 0.3-0.5 kg/m² per coat right into the wet fiber 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 two coats are dry, apply the top coat with one or more additional coat of Sikalastic®-501 Roofseal Plus around 0.6-0.7 kg/m² per coat.

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

CLEANING OF EQUIPMENT

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

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.

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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