Sikalastic®- 560

Economical and eco-friendly liquid roof waterproofing solution based on modified polyurethane

**Product Description**

Sikalastic® 560 is a cold applied, one component waterborne liquid applied waterproofing membrane based on modified polyurethane.

**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**

- UV resistant and resistant to yellowing and weathering
- Highly elastic and crack bridging
- Non-toxic and VOC compliant water based coating
- One component - ready to use
- Excellent adhesion on porous and non-porous substrates
- Seamless waterproofing membrane
- Water vapour permeable
- 12 months shelf life

**Tests**


Fulfils Solar Reflective Index requirements as per ASTM E1980

**Product Data**

<table>
<thead>
<tr>
<th>Form</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance /Colours</td>
<td>White</td>
</tr>
<tr>
<td>Packaging</td>
<td>10 kg Plastic Pails</td>
</tr>
<tr>
<td>Storage</td>
<td></td>
</tr>
<tr>
<td>Storage Conditions/ Shelf-Life</td>
<td>Best before 12 months if stored properly in undamaged and unopened original sealed packaging in dry conditions at temperature between +5°C and +30°C</td>
</tr>
</tbody>
</table>
Technical Data

Chemical Base
Modified Polyurethane dispersion

Density
1.35 kg/l
All density values at +30°C

Solid Content
~ 48% (by volume)
~ 66% (by weight)

Service Temperature
-10°C to +80°C (with reinforcement)
-5°C to +80°C (without reinforcement)

Mechanical / Physical Properties

Tensile Strength
Free Film: ~1.5 N/mm² (According to ASTM D2370)

Elongation at Break (%)
Free Film: ~350% (According to ASTM D2370)

Emissivity
0.91 (According to ASTM E1980)

Solar Reflectance Index

Solar Direct Reflectance
0.80 (According to ASTME1980)

System Information

System Structure
Roof Coating
For UV-stable coating, for extend life of old roofs or as reflective coating to enhance energy efficiency.

Build up:
Sikalastic®-560 applied in total three coats
Primer Coat plus two coats

Substrates:
Concrete, metals, wood, tiles

Primer:
Sikalastic®-560 diluted with 10% water

Total thickness:
~ 0.3 – 0.5 mm

Total consumption:
~ 0.8 – 1.4 kg/m²

Roof Waterproofing
For cost efficient waterproofing solutions in new construction and refurbishment projects

Build up:
Sikalastic®-560 applied in total three coats
Primer Coat plus two coats

Substrates:
Concrete, metals, wood, tiles

Primer:
Sikalastic®-560 diluted with 10% water

Total thickness:
~ 1.0 – 1.3 mm

Total consumption:
~ 2.1 – 2.5 kg/m²

Sika® Reemat can be applied in areas with high movements, irregular substrate or to bridge cracks, joints and seams on the substrate as well as for details.

Attention: Do not apply more than 0.75 kg/m² Sikalastic 560 per coat for layers without reinforcement.
Application Details

Substrate Treatment

Cementitious substrates:
New concrete should be cured for at least 28 days and should have a Pull off strength \( \geq 1.5 \text{ N/mm}^2 \).
Cementitious or mineral based substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and to achieve an open textured surface.
Loose friable material and weak concrete must be completely removed and surface defects such as blowholes and voids must be fully exposed.
Repairs to the substrate, filling of joints, blowholes/voids and surface levelling must be carried out using appropriate products from the Sikafloor\textsuperscript{®}, Sikadur\textsuperscript{®} and Sikagard\textsuperscript{®} range of materials.
High spots must be removed by e.g. 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 membrane either when the concrete temperature is falling or stable can reduce outgassing. It is generally beneficial, therefore, to apply the embedment coat in the late afternoon or evening.
Prime the substrate and always use a reinforced system.

Brick and stone:
Mortar joints must be sound and preferably flush pointed. Use localised reinforcement over joints and prime before applying Sikalastic\textsuperscript{®}-560.

Slates, tiles, etc.:
Ensure all slates/tiles are sound and securely fastened, replacing obviously broken or missing sections. Fully glazed tiles must be abraded prior to priming and subsequent treatment with Sikalastic\textsuperscript{®}-560.

Bituminous felt:
Ensure that Bituminous felt is firmly adhered or mechanically fixed to the substrate. Bituminous felt should not contain any badly degraded areas. Prime and always use a totally reinforced system.

Bituminous coatings:
Bituminous coatings should not have sticky or mobile surfaces, volatile mastic coatings, or old coal tar coatings. Prime and always use a totally reinforced system.

Metals:
Metals must be in sound condition. Abrade exposed surfaces to reveal bright metal. Use localised reinforcement over joints and fixings.

Wooden substrates:
Timber and timber based panel roof decks are to be in good condition, firmly adhered, or mechanically fixed.

Paints/Coatings:
Ensure the existing material is sound and firmly adhered. Remove any oxidized layers and use localised reinforcement over joints.

Substrate Préparation

Substrate Priming

<table>
<thead>
<tr>
<th>Substrate</th>
<th>Primer</th>
<th>Consumption (kg/m(^2))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cementitious, Brick &amp; Stone, Slate, Tilles, Bituminous felt, Bituminous Coatings, Metals, Wooden &amp; Paints</td>
<td>Sikalastic\textsuperscript{®} 560 diluted with 10% water</td>
<td>( \approx 0.3 – 0.35 )</td>
</tr>
</tbody>
</table>

Thèse figures are theorotical and do not include for any additional material required due to surface porosity, surface profile, variations in level and wastages etc.
<table>
<thead>
<tr>
<th>Application</th>
<th>Conditions/ Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substrate Temperature</td>
<td>+8°C min / +40°C max</td>
</tr>
<tr>
<td>Ambient Temperature</td>
<td>+8°C min / +40°C max</td>
</tr>
<tr>
<td>Relative Air Humidity</td>
<td>80% max</td>
</tr>
<tr>
<td>Dew Point</td>
<td>Beware of condensation. Surface temperature during application must be at least +3°C above dew point</td>
</tr>
</tbody>
</table>

**Application Instructions**

**Mixing**

Prior to application, stir Sikalastic® 560 thoroughly for 1 minute in order to achieve a homogeneous mixture.

Over mixing must be avoided to minimise air entrainment.

**Application Method / Tools**

Application Method *(please refer to the most recent issue of the Method Statement)*

Prior the application of Sikalastic®-560 the priming coat must have cured to 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®-560 is applied in total three coats, Primer Coat plus two coats. Primer Coat is applied with a dilution of 10% in water which will cure after 1-2 hours, then apply first coat. Prior to the application of 2nd coat the indicated waiting time is 6-12 hrs.

**Roof Waterproofing:** Sikalastic®-560 is applied in combination with Sikafab 1 and/or Sika Reemat:

1. Apply primer coat of Sikalastic®560 with 10% dil with water, which will cure in 1-2 hrs with an approx. consumption of 0.3 – 0.35 kg/m²
2. Apply the first coat of appr 0.70 – 0.75 kg/m² of Sikalastic® -560 on a length of approx. 1m
3. Roll in the Sika Fab1 or Sika® Reemat Premium at the detailing and ensure that there are no bubbles or creases. Overlapping of the Sikafab 1 min 30mm
4. Apply second coat of appr. 0.60 – 0.70 kg/m² coat right into the wet fabric to achieve the required film thickness
5. Third Coat of shall be done after the coated surface has dried up(2-6Hrs) with an approximate coverage of 0.50– 0.70 kg/m²

Please note, always begin with details prior starting with waterproofing the horizontal surface. For details follow step 1-5.

The declaration of consumption rates is without obligation and depends on factors like substrate porosity, substrate temperature, relative air humidity and air temperature.

**Roof Waterproofing over old bituminous membranes:** Sikalastic®-560 can be applied over old bituminous membranes. First clean the membrane and then coat it with a SikaBit® Primer or a Solvent based bituminous Primer, sprinkle fine sand over this coat and allow it to dry for at least 12 hours or overnight. This coat once dries is ready to take the Roof Waterproofing System as per the Standard Consumption above only the Primer Coat will be eliminated while applying the system.

**Tools**

Drill and paddle:

Sikalastic®-560 should be mixed for one minute using a drill and paddle.

Short-piled lamb skin roller:

Used in the application of Sikalastic®-560 to ensure a consistent thickness of the seamless Sika® Roof systems.

Thick hair brush:

For application of Sikalastic®-560 to all details and penetrations.

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...
Sika® Roofing Systems. Existing chippings should be removed by hand or scrubbling prior to power washing.

*Airless spray equipment:* Used only for the roof coating systems. Two spray applied layers is the minimum requirement. The pump should have the following parameter:

- min. pressure: 220 bar
- min. output: 5.1 l/min
- min.Ø nozzle: 0.83mm (0.033inch)

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

**Waiting Time / Over coating**
6-12 hrs. depending upon the changing ambient conditions particularly temperature and relative humidity.

**Notes on Application/ Limitations**
Do not apply Sikalastic®-560 on substrates with rising moisture.

Always apply during falling ambient and substrate temperature. If applied during rising temperatures “pin holing” may occur from rising air. Also ensure that the substrate moisture must be less than 4%

Ensure that temperature does not drop below 8 °C and that relative humidity does not exceed 80% until the Membrane has fully cured.

Ensure that Sikalastic®-560 is totally dry and the surface is without pinholes before applying any top coat.

Do not allow temporary ponding 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.

Ponding test on the System to be carried out only after a minimum of 7 days after the System is applied. In cold climates this period can be prolonged.

Sikalastic®-560 should not be applied on roofs subject to long-term water stagnation.

Sikalastic®-560 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 have to be considered.

Sikalastic®-560 is not recommended for pedestrian traffic. In case pedestrian traffic is unavoidable, Sikalastic®-560 shall be covered with appropriate elements such as tiles, paver blocks, screed etc.

Do not apply cementitious products (e.g. tile mortar) directly onto Sikalastic®-560. Use an alkaline barrier, for example river/ quartz sand.

**Value Base**
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.

**Health and Safety Information**
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.