



SIK-2011
GECA 23-2005-
Architectural &
Protective Coatings

Sikalastic®-560

Economical and eco-friendly liquid applied roof waterproofing solution based on Sika Co-Elastic Technology (CET)

Construction

Product Description

Sikalastic®-560 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

- 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
- Approved in accordance with AS 4020 and AS 4858 - Approval for Use in Potable Water and Wet Area applications.

Tests

Approval / Standards

Fulfils requirements acc. ETAG-005 Part 8
Fulfils initial solar reflectance requirements acc. Energy Star (0.820)
Meets requirements of external fire performance ENV 1187 B_{Roof} (T1) on non-combustible substrates

Product Data

Form

Appearance / Colours

Grey, terracotta, red and white (Energy Star)

Packaging

15 litre plastic pails



Storage

| | |
|--|---|
| Storage Conditions / Shelf Life | 12 months from date of production if stored properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5°C and +30°C. |
|--|---|

Technical Data

| | | | |
|--|--|--|-----------------|
| Chemical Base | Polyurethane modified Acrylic Dispersion | | |
| Density | 1.35 kg/l | | (EN ISO 2811-1) |
| | All density values at +23 °C | | |
| Solid Content | ~ 48% by volume / ~ 65% by weight | | |
| Service Temperature | -10°C to +80°C (with fleece) -5°C to +80°C (without fleece) | | |
| CIGS- Reflectance (initial) | 87% | | |
| | according to EN 410 in conjunction with CIGS sensitivity | | |
| Sikalastic® -560 white | | | |
| Solar Reflectance (initial) | 0.82 | | |
| | according to ASTM C 1549 | | |
| Sikalastic® -560 white | | | |
| Initial Emittance | 0.93 | | |
| | according to ASTM E 408, C1371, others | | |
| Sikalastic® -560 white | | | |
| SRI (Solar Reflectance Index) (Initial) | 102 | | |
| | according to ASTM E 1980 | | |
| Sikalastic® -560 white | | | |

All values related to the reflectance/emittance properties provided in this Product Data Sheet refer to the initial (properly cured, non-weathered) status of the product.

Mechanical / Physical Properties

| | | | |
|----------------------------|------------------------------|-------------------------|-------------|
| Tensile Strength | Free film: | ~ 1.5 N/mm ² | (DIN 53504) |
| | With Sikalastic® Fleece-120: | ~ 12 N/mm ² | (DIN 53504) |
| Elongation at Break | Free film: | ~ 350% | (DIN 53504) |
| | With Sikalastic® Fleece-120: | ~ 40-60% | (DIN 53504) |

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 one or two coats
Substrates: Concrete, metals, wood, tiles
Primer: Please refer to Sikalastic® Primer-Cleaner chart below
Total thickness: ~ 0.3 – 0.5 mm
Total consumption: ~ 0.9 – 1.4 kg/m²

Roof Waterproofing

For cost efficient waterproofing solutions in new construction and refurbishment projects.














Build up: Sikalastic®-560 applied in two coats and reinforced with Sikalastic® Fleece-120 and sealed with one or two additional coats of Sikalastic®-560
Substrates: Concrete, metals, wood, tiles
Primer: Please refer to Sikalastic® Primer-Cleaner chart below
Total thickness: ~ 1.0 - 1.3 mm
Total consumption: ~ 2.1 – 2.8 kg/m²

Sikalastic® Fleece-120 is applied at areas with high movements, irregular substrate or to bridge cracks, joints and seams on the substrate as well as for details.

| | | | | |
|--------------------|--|--|--|---|
| Product Guarantee* | Sikalastic®-560 3 years | Sikalastic®-560 5 years | Sikalastic®-560 10 years | Sikalastic®-560 15 years |
| Build up | Sikalastic®-560 applied in one coat | Sikalastic®-560 applied in one or more coats | Sikalastic®-560 applied in 2 coats, reinforced with Sikalastic® Fleece-120 and sealed with one coat of Sikalastic®-560 | Sikalastic®-560 applied in 2 coats, reinforced with Sikalastic® Fleece-120 and sealed with two coats of Sikalastic®-560 |
| Substrates | Sound concrete, metals, wood, tiles | | Sound concrete, metals, wood, tiles, bituminous membranes | |
| Primer | Please refer to Sikalastic® Primer chart below | | | |
| Dry film thickness | ~ 0.3 mm | ~ 0.5 mm | ~ 1.0 mm | ~ 1.3 mm |
| Total consumption | ≥ 0.9 kg/m ² (≥ 0.6 l/m ²) applied in one or more coats | ≥ 1.4 kg/m ² (≥ 1 l/m ²) applied in 2 coats | ≥ 2.1 kg/m ² (≥ 1.5 l/m ²) applied in 3 coats | ≥ 2.8 kg/m ² (≥ 2.0 l/m ²) applied in 4 coats |

* Product guarantee is based on a minimum required purchase quantity and application through approved applicator.

| | |
|---|---|
|  | One component product. Stir before using |
|  | UV resistant and resistant to yellowing |
|  | Highly elastic and crack-bridging |
|  | Vapour permeable |
|  | Easy application by brush, roller or airless spray equipment even when accessibility is limited |
|  | Bonds fully to most substrates, preventing the migration of water |
|  | Seamless waterproofing membrane |
|  | Fire resistant |
|  | Compatible with bituminous felts |
|  | Resistant to wind uplift |
|  | Wide colour range available |

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[®], SikaDur[®] and SikaGard[®] 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[®]-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[®]-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.

Existing SikaRoof[®] CET Systems

The existing SikaRoof[®] CET Systems should still be soundly adhered to the substrate.

Substrate Preparation**Substrate Priming**

| Substrate | Primer | Consumption [kg/m ²] |
|-------------------------|---|----------------------------------|
| Cementitious substrates | Sikalastic®-560 diluted with 10% water. | ≈ 0.3 |
| Brick and Stone | Sikalastic®-560 diluted with 10% water. | ≈ 0.3 |
| Slate, tiles, etc. | Sikalastic®-560 diluted with 10% water. | ≈ 0.3 |
| Bituminous felt | Sikalastic®-560 diluted with 10% water. | ≈ 0.3 |
| Bituminous coatings | Sikalastic®-560 diluted with 10% water | ≈ 0.3 |
| Metals | Sikalastic®-560 diluted with 10% water. | ≈ 0.3 |
| Wooden substrates | Sikalastic®-560 diluted with 10% water | ≈ 0.3 |
| Paints | Sikalastic®-560 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..

Application Conditions / Limitations

| | |
|-----------------------------------|--|
| Substrate Temperature | +8 °C min. / +35 °C max. |
| Ambient Temperature | +8 °C min. / +35 °C max. |
| Substrate Moisture Content | < 6 % moisture content. No rising moisture according to ASTM (Polyethylene-sheet). No water / moisture / condensation on the substrate. |
| Relative Air Humidity | 80 % max. |
| Dew Point | Beware of condensation. Surface temperature during application must be at least +3 °C above dew point. |

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 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 two coats. Prior to the application of a 2nd coat the indicated waiting time in the table below Waiting Time / Overcoating shall be allowed.

Roof Waterproofing: Sikalastic®-560 is applied in combination with Sikalastic® Fleece 120.

1. Apply first coat of approximately 1.0 kg/m² of Sikalastic®-560 on a length of approximately 1m.
2. Roll in the Sikalastic® Fleece-120 and ensure that there are no bubbles or creases. Overlapping of the fleece minimal 5 cm.
3. Apply second coat of approximately 0.5kg/m² coat right into the wet fleece to achieve the required film thickness. The entire application shall happen while Sikalastic®-560 is still liquid, wet in wet.
4. Repeat step 1-3 until the roof area is waterproof.
5. After the two coats are dry, seal the roof area with one or more additional coats of Sikalastic®-560 (≥ 0.5 kg/m² per coat).

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

Tools:***Jet washer:***

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

Solvent resistant short-piled lamb skin roller:

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

Thick hair brush:

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

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 (0.033 inch)

For example: Wagner Heavycoat HC 940 E SSP Spraypack

Cleaning of Tools

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

**Waiting Time /
Overcoating**

Before applying Sikalastic®-560 on primer Sikalastic®-560 diluted with 10% water:

| Substrate Temperature | Relative humidity | Minimum | Maximum |
|-----------------------|-------------------|-----------|---|
| +10°C | 50% | ~ 4 hours | After thorough cleaning ¹⁾ Sikalastic®-560 can be overworked at any time |
| +20°C | 50% | ~ 2 hours | |
| +30°C | 50% | ~ 1 hour | |

Before applying Sikalastic®-560 on Sikalastic®-560 (without fleece) allow 1st coat to dry:

| Substrate Temperature | Relative humidity | Minimum | Maximum |
|-----------------------|-------------------|-----------|---|
| +10°C | 50% | ~ 8 hours | After thorough cleaning ¹⁾ Sikalastic®-560 can be overworked with itself at any time |
| +20°C | 50% | ~ 6 hours | |
| +30°C | 50% | ~ 4 hours | |

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

Before applying Sikalastic®-560 topcoat on Sikalastic®-560 reinforced with fleece allow material to dry:

| Substrate Temperature | Relative humidity | Minimum | Maximum |
|-----------------------|-------------------|------------|---|
| +10°C | 50% | ~ 36 hours | After thorough cleaning ¹⁾ Sikalastic®-560 can be overworked with itself at any time |
| +20°C | 50% | ~ 24 hours | |
| +30°C | 50% | ~ 12 hours | |

Note: Times are approximate and will be affected by 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.

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.

Sikalastic®-560 should not be applied on roofs subject to long-term 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 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-120 in order to guarantee sufficient crack-bridging ability.

Do not apply Sikalastic®-560 directly on insulation boards. Instead use a separation layer like Sikalastic®-Carrier between insulation board and Sikalastic®-560.

Sikalastic® Fleece-120 can be used as total reinforcement or for partial reinforcements over dynamic cracks and joints.

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, stone plates or wooden panels.

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

The fire resistance performance has been tested internally according to ENV 1187 B_{Roof} (T1)

Curing Details

Applied Product ready for use

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

| Substrate Temperature | Relative humidity | Touch dry | Rain resistant | Full cure |
|-----------------------|-------------------|-----------|----------------|-----------|
| +10°C | 50% | ~ 4 hours | ~ 12 hours | ~ 6 days |
| +20°C | 50% | ~ 2 hour | ~ 8 hours | ~ 4 days |
| +30°C | 50% | ~ 1 hour | ~ 4 hours | ~ 2 days |

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

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 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 proprietary rights of third parties must be observed. All orders are accepted subject to our current terms and conditions of sale. Users should always refer to the most recent issue of the Australian version of the Product Data Sheet for the product concerned, copies of which will be supplied on request.

PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.



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