

## PRODUCT DATA SHEET

# Sikalastic®-560 GCC

Eco-friendly Liquid Applied Roof Waterproofing Solution Based on Sika Co-Elastic Technology (CET)

### DESCRIPTION

Sikalastic®-560 GCC 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
- For cost efficient life cycle extension of failing exposed 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, fully bonded waterproofing membrane
- Water vapour permeable

### APPROVALS / CERTIFICATES

- Conforms to the requirements of LEED EQ Credit 4.2: Low - Emitting Materials: Paints & Coatings: VOC < 100 gm/l
- USGBC LEED rating: conforms to LEED SS Credit 7.2 - Heat Island Effect-Roof, SRI ≥ 78
- Conforms to Estidama requirements for reflectivity
- Conforms to Dubai Green Buildings for reflectivity

### PRODUCT INFORMATION

<b>Composition</b>	Polyurethane modified Acrylic Dispersion	
<b>Packaging</b>	20 kg plastic pails	
<b>Colour</b>	White, liquid form	
<b>Shelf life</b>	12 months minimum from date of production if stored properly in original, unopened and undamaged sealed packaging.	
<b>Storage conditions</b>	Store in dry conditions in original packaging at temperatures between +5 °C and +30 °C. Protect from direct sunlight and frost.	
<b>Density</b>	~1.31 kg/l	(EN ISO 2811-1)
<b>Solid content by weight</b>	~65 %	
<b>Solid content by volume</b>	~48 %	

### TECHNICAL INFORMATION

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<b>Tensile strength</b>	Free film: ~1.5 N/mm <sup>2</sup>	(DIN 53504)
<b>Permeability to water vapour</b>	Nil penetration	(BS EN 12390 Part 8)
<b>Reaction to fire</b>	Class A	(ASTM E-84)
<b>Solar reflectance index</b>	93.24	(ASTM E 1980 : 11)
<b>Service temperature</b>	-10 °C min. / +80 °C max. (with reinforcement) -5 °C min. / +80 °C max. (without reinforcement)	

## SYSTEMS

<b>System structure</b>	<p><b>Roof Coating:</b> For UV-stable coating, to extend life of old roofs or as reflective coating to enhance energy efficiency.</p> <p>Build up: Sikalastic®-560 GCC (applied in minimum of 2 coats)</p> <p>Substrates: Cementitious, brick, stone, metals and existing bituminous membranes</p> <p>Primer: Please refer to Sikalastic® Primer chart</p> <p>Dry film thickness: 0.35 mm – 0.75 mm</p> <p>Total consumption: 1.0 kg/m<sup>2</sup> – 2.1 kg/m<sup>2</sup> (depending on application – please refer to Sika’s Technical Department for further information)</p> <p><b>Attention:</b> Do not apply more than 0.35 kg/m<sup>2</sup> Sikalastic®-560 GCC per coat for layers without reinforcement.</p>	
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## APPLICATION INFORMATION

<b>Ambient air temperature</b>	+8 °C min. / +40 °C max.
<b>Relative air humidity</b>	80 % max.
<b>Substrate temperature</b>	+8 °C min. / +40 °C max.
<b>Dew point</b>	Beware of condensation. Surface temperature during application must be at least +3 °C above dew point.
<b>Substrate moisture content</b>	< 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 <sup>2</sup> ]
Cementitious substrates	Sikalastic®-560 GCC diluted with 10 % water.	~0.3
Brick and Stone	Sikalastic®-560 GCC diluted with 10 % water.	~0.3
Bituminous felt	Sikalastic® Metal Primer or Sikalastic®-560 GCC diluted with 10 % water. Please consult with our Technical Services Department prior to use.	~0.2 - 0.3
Metals (Ferrous or galvanised metals, lead, copper, aluminium, brass or stainless steel)	Sikalastic® Metal Primer or Sikalastic®-560 GCC diluted with 10 % water. Please consult with our Technical Services Department prior to use.	~0.2 - 0.3
Paints	Sikalastic®-560 GCC diluted with 10 % water subject to adhesion and compatibility tests.	~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 to overcoating

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

Substrate Temperature	Relative humidity	Minimum	Maximum <sup>1)</sup>
+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®-560 GCC on the second coat of Sikalastic®-560 GCC allow intermediate coats to fully cure

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

<sup>1)</sup> 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 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 0.35 kg/m<sup>2</sup>.

## 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 temper-

## 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®-560 GCC 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®-560 GCC 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®-560 GCC is totally dry and the surface is without pinholes before applying further coats.

Do not apply Sikalastic®-560 GCC if inclement weather such as rain, fog or extreme humidity (80 % maximum) causing condensation is expected. Ensure that the applied Sikalastic®-560 GCC 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®-560 GCC should not be applied on roofs subject to long-term ponding water especially with subsequent periods of frost. 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®-560 GCC top coats with consumption rates greater than 0.35 kg/m<sup>2</sup>.

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

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®-560 GCC is not recommended for pedestrian traffic. In case pedestrian traffic is unavoidable, Sikalastic®-560 GCC shall be covered with appropriate paving materials.

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

Sikalastic®-560 GCC is to be used mainly in exposed applications and is not for inverted buried systems. Sikalastic®-560 GCC should not be subject to permanent water immersion.

Whilst Sikalastic®-560 GCC is resistant to most commonly encountered atmospheric pollutants, proprietary 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®-560 GCC after 3 months exposure, requires adhesion tests.

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## 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.

## APPLICATION INSTRUCTIONS

### SUBSTRATE PREPARATION

All substrates must be cleaned and prepared using high pressure water jet. Abrasive blast cleaning, scari-fying equipment to or other suitable approved mechanical methods.

#### **Cementitious substrates:**

New concrete should be cured for at least 28 days and should have a pull-off strength  $\geq 1.5 \text{ N/mm}^2$ .

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®-560 GCC either when the concrete temperature is falling or stable can reduce outgassing. Prime the substrate before applying the Sikalastic®-560 GCC systems.

#### **Brick and stone:**

Mortar joints must be sound and flush pointed. Use localised reinforcement over connection joints and prime before applying Sikalastic®-560 GCC.

#### **Bituminous felt:**

Ensure that Bituminous felt is firmly adhered or mechanically fixed to the substrate. Bituminous felt should not contain any badly degraded areas and be primed before applying Sikalastic®-560 GCC.

#### **Metals:**

Metals must be in a clean sound rust free condition. Metals surfaces must be free of oil and greases. Abrade exposed surfaces to reveal bright metal. Use localised reinforcement over joints and fixings.

#### **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 be clean, dust free and dry.

## MIXING

Prior to application, stir Sikalastic®-560 GCC thoroughly for 1 minute in order to achieve a homogeneous mixture using a slow speed (330 - 500 rpm) drill and basket type paint mixer.

Over mixing must be avoided to minimise air entrainment.

## APPLICATION

Prior to the application of Sikalastic®-560 GCC the priming coat must have cured tack-free. Protect adjacent areas from splashes, over painting, damage etc. with an adhesive tape or plastic.

Sikalastic®-560 GCC is applied in 2 – 6 coats as per the required system. 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 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 GCC 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®-560 GCC to ensure a consistent thickness of the seamless SikaRoof® systems.

Thick hair brush: For application of Sikalastic®-560 GCC to all details and penetrations.

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

- minimum pressure: 220 bar
- minimum output: 5.1 l/min
- minimum  $\varnothing$  nozzle: 0.83 mm (0.033 inch)

For example: Wagner Heavycoat HC 940 E SSP Spraypack.

**Note:** Please refer to the most recent issue of the specific Method Statement

## 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 declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

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## 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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