

# Sika® Screed HardTop-70

## High strength, rapid hardening levelling mortar

Construction

**Product Description** Sika@Screed HardTop-70 is a soft plastic consistency, polymer modified, fast curing, rapid load bearing and over-coatable, horizontal levelling mortar. It is designed for application at a minimum layer thickness of 10 mm, with almost shrinkage-free hardening and curing with moisture binding properties, plus very high abrasion resistance and compressive strength.

**Uses** Sika@Screed HardTop-70 is particularly suitable for the following uses due to its rapid drying, almost shrinkage-free hardening, high abrasion resistance and compressive strength:

- Minor repairs to heavily stressed industrial floors, with rapid over-coating (typically 2 hours) and reuse of the area (from 18 hours), especially good for areas with varying thicknesses, (due to its almost shrinkage-free hardening) – the "Sika®Screed Lightning Formula"
- For the surface levelling of small sections of weathered external areas such as terraces, covered walkways, concrete pathways etc. with light mechanical load.
- Quick drying repairs and use as a floating screed substitute (CT C70 F8), which can be covered or overlaid with all types of flooring materials after just 18 hours (CM value of less than 2.0 wt.% is achieved for installation in any layer thicknesses, due to the internal curing and moisture binding properties).

**Characteristics/ Advantages** Sika@Screed HardTop-70 is characterised by a unique combination of properties:

- Soft plastic consistency of pre-batched mortar which is easy to apply, non-tacky and can also be laid as a Monolithic floor finish, or on a slope.
- Pot life of at least 25 minutes
- Almost shrinkage-free hardening for levelling at almost any thickness
- Rapid hardening for area reuse (> 45 N/mm<sup>2</sup> compressive strength after 24 hours at 20°C)
- Internal water binding properties, due to an innovative new cement binder system (CM value < 2 wt.% without external drying!)
- Very high flexural and compressive strengths
- Extremely high abrasion resistance due to crystalline quartz aggregates (Class A6 acc. to Böhme)
- High dynamic load bearing floor levelling
- Coatable with Sikafloor resin-based flooring products about 2 hours after finishing (at 20°C)
- Class R4 acc to EN1504-3
- EN 13813 CT-C70-F8-A6
- High frost and freeze/thaw resistance – XF4 acc to ÖNorm B 4710-1
- Suitable for use in wet areas
- Mineral based, non-toxic and ecologically safe
- EMICODE EC-1 Plus R / very low emissions
- Fire rating Euroclass A1



## Attestation

<b>Test reports</b>	Declaration of Performance Identification number:  0203020400100000951029
---------------------	---

## Product Data

### Form

<b>Appearance/Colours</b>	Light grey powder
<b>Packaging</b>	25 kg paper bags

### Storage

<b>Storage Conditions/Shelf Life</b>	12 months from date of production if stored properly in undamaged, unopened and original sealed packaging, in dry conditions.
--------------------------------------	---

### Technical Data

<b>Chemical base</b>	Special cement binder with hard aggregates
<b>Density</b>	Bulk density: ca. 1.50 kg/l Fresh mortar density: ca. 2.25 kg/l
<b>Granulometry</b>	Max. particle size 3 mm
<b>Layer thickness</b>	Minimum: 10 mm per operation Maximum: 200 mm per operation

### Mechanical / Physical Properties

<b>Compressive strength</b>	ca. 45 N/mm <sup>2</sup> 1d / 20°C / EN 196-1 ca. 70 N/mm <sup>2</sup> 28d / 20°C / EN 196-1
<b>Flexural strength</b>	ca. 6 N/mm <sup>2</sup> 1d / 20°C / EN 196-1 ca. 8 N/mm <sup>2</sup> 28d / 20°C / EN 196-1
<b>Abrasion resistance</b>	Böhme class A6 (EN13892-3)  BCA AR 0.5 (EN 13892-4) (<50µm)

### System structure

<b>The 'Sika®Screed Lightning Formula' for rapid repairs</b>		
<b>Bonded screed fully usable in 18 hours</b>	<b>Bonded screed with stain and oil protection fully usable in 72 hours</b>	<b>Terrace and balcony repairs 1 working day</b>
Sika®Screed-10 BB	Sika®Screed-10 BB	Sika®Screed-10 BB
<b>10 minutes</b>	<b>10 minutes</b>	<b>10 minutes</b>
Sika®Screed HardTop-70 trowel finished	Sika®Screed HardTop-70 trowel finished	Sika®Screed HardTop-70 trowel finished
<b>1-2 hours</b>	<b>1-2 hours</b>	<b>1-2 hours</b>
Curing with polythene sheet	Curing with polythene sheet	Sika Concrete Primer
<b>16 hours</b>	<b>3-16 hours</b>	<b>15 minutes</b>
	Sikagard-914W Stainprotect Primer	Sikafloor-415 sanded
	<b>120 minutes</b>	<b>1 - 2 hours</b>
	Sikagard-915 Stainprotect	Sikafloor-415/416 Top Seal
<b>18 hours to full load bearing</b>	<b>48 hours to full load bearing</b>	<b>24 hours to full use</b>

Above mentioned values and time limits are valid for ca.20°C (Air,water,poweder and substrate), mixing ratio of 2,8l water per 25kg bag Sika®Screed HardTop-70 and a layer thickness of 30mm.

Sika®Screed HardTop-70 is a special cement binder based mortar which is not compatible with standard Portland cements and therefore must never be mixed or blended with OPC cements.

Therefore as cementitious bonding bridge only Sika®Screed-10 BB (wet on wet method) must be used or Sikafloor-161 (wet on wet method) as resin bonding bridge.

After final trowelling (hardened, light grey, dry surface) Sika®Screed HardTop-70 can be primed for 3hours without substrate preparation with various Sikafloor-primers.

When hardened, Sika®Screed HardTop-70 can then be overcoated with standard OPC cement based products (tile adhesive) or Sika Parquet bonds after 24hours.

---

## Application Instructions

<b>Coverage</b>	Bonding bridge ca. 1.8 kg/m <sup>2</sup> Sika®Screed-10 BB (pre-batched bond coat) Ca. 2.1 kg Sika®Screed HardTop-70 powder/m <sup>2</sup> per mm of ready-mixed mortar <ul style="list-style-type: none"><li>- The actual material consumption is dependent on the substrate roughness and the method of application.</li></ul>
-----------------	--

<b>Substrate preparation</b>	<ul style="list-style-type: none"><li>- The concrete substrate must be structurally sound and have adequate compressive strength (&gt;25 N/mm<sup>2</sup>), together with a minimum tensile bond strength of 1.5 N/mm<sup>2</sup>.</li><li>- Requirement for a good bonding between the substrate and SikaScreed HardTop-70 is a good surface preparation by grinding, blasting or milling technology and the use of a system bonding bridge.</li><li>- Construction joints, vertical connections, especially cutting edges or connections to third-party components such as shafts, rails, profiles, etc., have to be primed in any case with Sikafloor-161.</li><li>- <b>Substrate Preparation: Surface with normal requirements</b> Substrate must be clean, absorbent (porous), grease and oil free, with no loose or crumbling parts. Laitance, paints or other surface treatment agent must be completely removed. Prior of the application of the system bonding SikaScreed-10 BB, the substrate must be saturated surface dry and the surface should have a slightly moisture character. Please avoid puddles.</li><li>- <b>Surface Preparation: Surface with higher requirements</b> Critical surfaces can be primed to improve the tensile bond strength with the resin bonding bridge Sikafloor-161 (wet-on-wet method). The pot life of Sikafloor-161 has to be considered. Subsets are expertly to mix and the freshly bonding bridge has to be covered with SikaScreed HardTop-70 within 15 minutes. Contrary to the pretreatment with a cement bonding bridge, the substrate must be dry before the application of Sikafloor-161.</li></ul>
------------------------------	--

---

## Notes on application / Limitations

<b>Application temperature</b>	Minimum: +10°C Maximum +30°C  Absolute lowest limit of the substrate temperature for the application of SikaScreed HardTop 70 is +10°C. Lower temperatures can interrupt the setting and lead to damages. Fresh mortar temperature at least +15°C, maximum +25°C
--------------------------------	--

---

## Application instructions

<b>Mixing</b>	Sika®Screed-10 BB Bonding bridge Mix the pre-batched bond coat (25 kg bags) with 6.0 – 6.6 litres of water per bag, for 3 minutes. Sika®Screed HardTop-70 levelling mortar: 2.8 – 3.0 litres of water per 25 kg bag  In a suitable container, mix the Sika®Screed HardTop-70 and water in the specified ratio with an electric mixer (maximum 500 rpm.) until smooth and homogeneous. It is important to mix for a min. 3 minutes.
---------------	---

<b>Application method</b>	<p>Work the freshly mixed Sika®Screed-10 BB system bonding bridge into the slightly moist concrete substrate with a stiff brush.</p> <p>Mix the Sika®Screed HardTop-70 in a paddle mixer and apply on the Sika®Screed-10 BB bonding bridge 'wet on wet' and screed off to level with battens.</p> <p>Any of the Sika®Screed-10 BB bonding bridge that has dried must be removed mechanically and replaced before application of the Sika®Screed HardTop-70.</p> <p>To obtain optimum surface strength, finish the Sika®Screed HardTop-70 with suitable trowels or floats. Do not use heavy troweling machines (like sit up power floating machines).</p> <p>Spraying of water onto the surface as treatment is strongly prohibited and lead to less surface strength.</p> <p><b>Don't forget curing!</b> Curing must start immediately after the last finishing operation, using polythene sheet or application of a suitable impregnation (Sikafloor-161).</p> <p>In drafty areas, open spaces, at temperatures between 10°C and 15°C and at a very dry climate, the freshly applied mortar immediately has to be covered with a polythene sheet (before finishing).</p> <p>Curing with sheeting must be maintained at least overnight (18 hours). At temperatures between 10°C and 15°C (substrate and air) the mortar has to be cured for minimum 48 hours, to avoid reaction failures.</p> <p>Don't apply SikaScreed HardTop-70 in a summery climate direct in the sunlight. When expected temperatures are above +25°C, the start application start must be after reaching the daily maximum temperature. The substrate, the dry mortar (bags) and the water must be kept cool.</p>
<b>Pot life</b>	<p>The pot life is 25 minutes minimum (at 20°C).</p> <p>Start of finishing: &gt; 45 minutes (at 20°C)</p> <p>End of finishing: &lt; 120 minutes (at 20°C)</p> <p>Lower or higher material and substrate temperatures significantly retard or accelerate the above times.</p>
<b>Important information</b>	<ul style="list-style-type: none"> <li>- Never mix Sika®Screed-10 BB and Sika®Screed HardTop-70 with Portland cement or other binders. Do not use the mixing equipment alternately for Sika®Screed HardTop-70 materials and cement based mortars.</li> <li>- Coverage of the reinforcement with Sika®Screed HardTop-70 must not be considered as carbonation protection.</li> <li>- To become dust free industrial used areas we suggest the use of a sealer or a coating system build up. Untreated surfaces can become dusty over time. Marks from trowelling or floating or cloudy areas at untreated or transparent sealed surfaces are state of the art and no reason for a claim.</li> </ul>
<b>Health and Safety Information</b>	
<b>Value Base</b>	<p>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.</p>
<b>Important safety information</b>	<p>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.</p>

## 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.



Sika Austria GmbH  
Bingser Dorfstrasse 23  
AT-6700 Bludenz  
Austria

Phone +43 5 0610-0  
Fax +43 5 0610-1901  
[www.sika.at](http://www.sika.at)

