

Sika® Screed HardTop-80

High strength, rapid hardening, floor levelling mortar

Construction

Product Description Sika@Screed HardTop-80 is a soft plastic consistency, polymer modified, fast curing, rapid load bearing and over-coatable, horizontal levelling mortar that is designed for application in a minimum layer thickness of 8 mm. It is almost shrinkage-free during hardening and curing, plus it has very high abrasion resistance and compressive strength.

Uses Sika@Screed HardTop-80 is particularly suitable for the following uses due to its rapid drying, almost shrinkage-free hardening, high abrasion resistance and compressive strength:

- Minor and major repairs to heavily stressed, industrial concrete flooring with full usability from 24 hours.
- Rapidly coatable levelling mortar for Sikafloor resin-based flooring systems.

Characteristics/ Advantages Sika@Screed HardTop-80 is characterised by unique combinations of properties:

- Soft plastic consistency, pre-batched mortar which is easy to apply, is non-tacky, and can also be laid as Monolithic floor finish, or on a slope.
- Pot life of at least 45 minutes
- Almost shrinkage-free hardening for levelling at almost any thickness
- Rapid hardening for immediate use (> 45 N/mm² compressive strength after 24 hours at 20°C)
- Very high final strength
- Extremely high abrasion resistance due to crystalline quartz aggregates (Class A9 acc. to Böhme)
- High dynamic load bearing floor levelling
- Coatable with Sikafloor resin-based flooring products after about 5 hours from the end of finishing (at 20°C)
- Class R4 acc to EN1504-3
- EN 13813 CT-C80-F8-A9
- Mineral based, non-toxic and ecologically safe
- EMICODE EC-1 Plus R / very low emissions
- Fire rating Euroclass A1

Attestation

Test reports Declaration of Performance Identification number:
0203020400100000901029

Appearance/Colours Light grey powder



Product Data

Form

Appearance/Colours Light grey powder

Packaging 25 kg paper bags

Storage

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

Technical Data

Chemical base Special cement binder with hard aggregates

Density Bulk density: ca. 1.50 kg/l
Fresh mortar density: ca. 2.25 kg/l

Granulometry Max. particle size 3.2 mm

Layer thickness Minimum: 8 mm per operation
Maximum: 80 mm per operation

Mechanical / Physical Properties

Compressive strength ca. 40 N/mm² 1d / 20°C / EN 196-1
ca. 80 N/mm² 28d / 20°C / EN 196-1

Flexural strength ca. 6 N/mm² 1d / 20°C / EN 196-1
ca. 8 N/mm² 28d / 20°C / EN 196-1

Abrasion resistance Böhme class A9 (EN13892-3)

BCA AR 0.5 (EN 13892-4)
(<50µm)

System Data

System structure Sika®Screed HardTop-80 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 the only permissible cementitious bonding bridge is Sika®Screed-10 BB (wet on wet method). Alternatively Sikadur 32 can be used (wet on wet method) as resin bonding bridge.

When hardened, Sika®Screed HardTop-80 can then be overcoated with standard OPC cement based products.

Application Instructions

Coverage Bonding bridge: ca. 1.8 kg/m² Sika®Screed-10 BB (pre-batched bonding bridge)
Ca. 2.1 kg Sika®Screed HardTop-80 powder/m² per mm of ready-mixed mortar

- The actual material consumption is dependent on the substrate roughness and the method of application.

Substrate preparation

- The concrete substrate must be structurally sound and have adequate compressive strength (>25 N/mm²), together with a minimum tensile bond strength of 1.5 N/mm².
- The primary requirement for a good bond between the substrate and Sika®Screed HardTop-80 is good substrate preparation. This is best carried out by mechanical means, followed by blast cleaning and use of a bond coat of Sika®Screed-10 BB.
- Construction joints, vertical connections, especially cutting edges or connections to third-party components such as shafts, rails, profiles, etc., must be primed in all cases with Sikadur 32.

- **Substrate Preparation: Surface with normal requirements**

Substrate must be clean, absorbent (porous), grease and oil free, with no loose or crumbling parts. Laitance, paints or other surface treatment agents must be completely removed. Prior of the application of the SikaScreed-10 BB, the substrate must be saturated surface dry and the surface should have a slightly damp character. Ponding of any water must be avoided.

- **Surface Preparation: Surface with higher requirements**

Critical surfaces can be primed to improve the tensile bond strength with the resin bonding bridge Sikadur 32 (wet-on-wet method). The pot life of Sikadur 32 has to be considered. The freshly applied bonding bridge has to be covered with SikaScreed HardTop-80 within 15 minutes. Contrary to the pre-treatment with a cement based bonding bridge, the substrate must be dry before the application of Sikadur 32.

If in doubt, prepare sample areas.

Notes on application / Limitations

Application temperature

Minimum: +10°C
Maximum +30°C

Absolute lowest limit of the substrate temperature for the application of SikaScreed HardTop 80 is +10°C. Lower temperatures can interrupt the setting and lead to cracking.

Fresh mortar temperature at least +15°C, maximum +25°C

Application instructions

Mixing

Sika®Screed-10 BB bonding bridge: Mix the pre-batched bonding bridge (25 kg bags) with 6.0 – 6.6 litres of water per bag, for 3 minutes.

Sika®Screed HardTop-80 levelling mortar: 2.8 – 3.0 litres of water per 25 kg bag

In a suitable container, mix the Sika®Screed HardTop-80 and water in the specified ratio with an electric mixer (maximum 500 rpm.) until smooth and homogeneous. It is important to mix for min. 3 minutes.

Application method

Work the freshly mixed Sika®Screed-10 BB into the slightly damp concrete substrate with a stiff brush.

Mix the Sika®Screed HardTop-80 in a paddle mixer and apply on the Sika®Screed-10 BB bonding bridge 'wet on wet' and screed off to level with battens.

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-80.

To obtain optimum surface strength, finish the Sika®Screed HardTop-80 with suitable trowels or floats. Do not use heavy troweling machines (like sit up power floating machines).

Spraying of water onto the surface as treatment is strongly prohibited and lead to less surface strength.

Curing is essential and must start immediately after the last finishing operation, using polythene sheet or the application of a suitable impregnation (Sikafloor-161).

In drafty areas, open spaces at temperatures between 10°C and 15°C and in a very dry climate, the freshly applied mortar immediately has to be covered with a polythene sheet (before finishing).

Curing with sheeting must be maintained at least overnight (18 hours). At temperatures between 10°C and 15°C (substrate and ambient) the mortar has to be cured for minimum 48 hours, to avoid reaction failures.

Do not apply SikaScreed HardTop-80 in a Summery climate, in direct sunlight. When expected temperatures are above +25°C, the start application start must be after reaching the daily maximum temperature i.e. on a falling temperature scale. The substrate, the dry mortar (bags) and the water must be kept cool.

Pot life	<p>The pot life is 45 minutes minimum (at 20°C).</p> <p>Start of finishing: > 90 minutes (at 20°C)</p> <p>End of finishing: < 300 minutes (at 20°C)</p> <p>Lower or higher material and substrate temperatures retard or accelerate the above times significantly.</p>
Important information	<ul style="list-style-type: none"> - Never mix Sika@Screed-10 BB and Sika@Screed HardTop-80 with Portland cement or other binders. Do not use the mixing equipment alternately for Sika@Screed HardTop-80 materials and cement based mortars. - Coverage of the reinforcement with Sika@Screed HardTop-80 must not be considered as carbonation protection. - To ensure a dust free surface we suggest the use of a sealer or a coating system build up. Untreated surfaces can become dusty over time. - Sika@Screed HardTop-80 is not an aesthetic surface. - Sika@Screed HardTop-80 can be laid as a floating screed if applied at 80mm over suitable insulation.

Health and Safety Information

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.
Important 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.



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