

PRODUCT DATA SHEET

SikaScreed® HardTop-60

HIGH STRENGTH, RAPID HARDENING, FLOOR LEVELLING MORTAR

PRODUCT DESCRIPTION

SikaScreed® HardTop-60 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

SikaScreed® HardTop-60 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

SikaScreed® HardTop-60 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
- almost shrinkage-free hardening for levelling at variable thicknesses
- rapid hardening for immediate use (>35 N/mm² compressive strength after 24 hours at +20°C)
- very high final strength
- long trowelling window (>60min) for smooth surfaces
- high dynamic load bearing floor levelling
- primeable with Sikafloor®-161 within 4 hours from the end of finishing (at +20°C) without additional surface preparation
- mineral based, non-toxic and ecologically safe

APPROVALS / STANDARDS

- EN 13813 CT-C60-F7
- EMICODE EC-1 Plus R / very low emissions
- Fire rating Euroclass A1

PRODUCT INFORMATION

Chemical Base	special cement binder with hard aggregates	
Packaging	25 kg paper bags	
Appearance / Colour	light grey powder	
Shelf Life	9 months from date of production	
Storage Conditions	Store properly in undamaged, unopened and original sealed packaging, in dry conditions.	
Density	bulk density	~ 1.50 kg/litre
	fresh mortar density	~ 2.25 kg/litre
Maximum Grain Size	D _{max} : 3.2 mm	

TECHNICAL INFORMATION

Abrasion Resistance	Böhme class A6	(EN 13892-3)
Compressive Strength	$\sim 35 \text{ N/mm}^2$ $\sim 60 \text{ N/mm}^2$	$\frac{1 \text{ day} / +20^\circ\text{C}}{28 \text{ days} / +20^\circ\text{C}}$ (EN 196-1)
Flexural Strength	$\sim 4 \text{ N/mm}^2$ $\sim 7 \text{ N/mm}^2$	$\frac{1 \text{ day} / +20^\circ\text{C}}{28 \text{ days} / +20^\circ\text{C}}$ (EN 196-1)

SYSTEM INFORMATION

System Structure	<p>SikaScreed® HardTop-60 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. When hardened, SikaScreed® HardTop-60 can be overcoated with standard OPC cement based products after corresponding surface preparation.</p> <p>Therefore as resin bonding bridge use SikaScreed®-20 EBB or Sikadur®-32 (wet on wet method) on dry or matt damp substrates.</p> <p>After final trowelling (hardened, light grey, dry surface) SikaScreed® HardTop-60 can be primed within 4 hours without substrate preparation with Sikafloor®-161.</p> <p>If waiting time of 4 hours is exceeded, SikaScreed® HardTop-60 has to be shotblasted.</p>
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APPLICATION INFORMATION

Consumption	<p><i>Bonding bridge SikaScreed®-20 EBB / Sikadur®-32:</i> For substrate roughness of 1.0 mm and normal absorbency: $\sim 0.6\text{-}1.0 \text{ kg/m}^2$. For higher substrate roughness and/or stronger absorbency the consumption has to be determined with a test area on site.</p> <p>$\sim 2.05 \text{ kg SikaScreed® HardTop-60 powder m}^2/\text{mm}$</p>									
Layer Thickness	<table><tr><td>minimum</td><td>8 mm per operation</td></tr><tr><td>maximum</td><td>80 mm per operation</td></tr></table>	minimum	8 mm per operation	maximum	80 mm per operation					
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Product Temperature	Fresh mortar temperature at least $+10^\circ\text{C}$, maximum $+25^\circ\text{C}$									
Ambient Air Temperature	minimum $+5^\circ\text{C}$ / maximum $+30^\circ\text{C}$									
Substrate Temperature	minimum $+10^\circ\text{C}$ / maximum $+30^\circ\text{C}$ Absolute lowest limit of the substrate temperature for the application of SikaScreed® HardTop-60 is $+10^\circ\text{C}$.									
Pot Life	<table><tr><td>pot life</td><td>30 minutes</td><td>at $+20^\circ\text{C}$</td></tr><tr><td>start of finishing</td><td>>90 minutes</td><td>at $+20^\circ\text{C}$</td></tr><tr><td>end of finishing</td><td>$\sim 60 - 90$ minutes after start of finishing</td><td>at $+20^\circ\text{C}$</td></tr></table> <p>Lower or higher material and substrate temperatures retard or accelerate the above times significantly.</p>	pot life	30 minutes	at $+20^\circ\text{C}$	start of finishing	>90 minutes	at $+20^\circ\text{C}$	end of finishing	$\sim 60 - 90$ minutes after start of finishing	at $+20^\circ\text{C}$
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APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

The concrete substrate must be structurally sound and have adequate compressive strength ($>25 \text{ N/mm}^2$), together with a minimum tensile bond strength of 1.5 N/mm^2 . Requirement for a good bonding between the substrate and SikaScreed® HardTop-60 is a good surface preparation by grinding, blasting or milling technology (minimum substrate roughness of 0.5 mm ac-

ording to DIN EN 1766) and the use of a system bonding bridge.

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 SikaScreed®-20 EBB / Sikadur®-32.

Surface Preparation:

Surfaces must be primed to improve the tensile bond strength with the resin bonding bridge SikaScreed®-20 EBB / Sikadur®-32 (wet-on-wet method). The pot life of the bonding bridge has to be considered. Subsets are expertly to mix and the fresh bonding bridge has to be covered with SikaScreed® HardTop-60 within 15 minutes at +20°C. Contrary to the pretreatment with a cement bonding bridge, the substrate must be dry before the application of the bonding bridge. If the substrate is damp, SikaScreed®-20 EBB / Sikadur®-32 has to be brushed intensively into the substrate.

MIXING

SikaScreed®-20 EBB / Sikadur®-32 bonding bridge: Mix the resin bonding bridge (Comp. A+B) for 3 minutes, until it is a homogenous mix. Pour into a new pail and mix again for 15 seconds.

SikaScreed® HardTop-60 levelling mortar: 2.8 – 3.0 litres of water per 25 kg bag.

In a suitable container, mix the SikaScreed® HardTop-60 and water in the specified ratio with an electric mixer (maximum 500 rpm.) until it is smooth and homogeneous. It is important to mix for minimum 3 minutes.

APPLICATION

Work the freshly mixed system bonding bridge into the concrete substrate with a stiff brush or level with a squeegee and roll it afterwards.

Mix the SikaScreed® HardTop-60 in a paddle mixer and apply on the SikaScreed®-20 EBB / Sikadur®-32 bonding bridge 'wet on wet' and screed off to level with battens. To obtain optimum surface strength, finish the SikaScreed® HardTop-60 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.

Don't forget curing! Curing must start immediately after the last finishing operation, using polyethylene sheet or application of Sikafloor®-161.

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 polyethylene sheet (before finishing).

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. Don't apply SikaScreed® HardTop-60 in a summery climate direct in the sunlight. When expected temperatures are above +25°C, the start application must be after reaching the daily maximum temperature. The substrate, the dry mortar (bags) and the water must be kept cool.

LIMITATIONS

- Never mix SikaScreed® HardTop-60 with Portland cement or other binders. Do not use the mixing equipment alternately for SikaScreed® HardTop-60 materials and cement based mortars.
- Coverage of the reinforcement with SikaScreed® HardTop-60 must not be considered as carbonation protection.
- 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.
- Cracking and cracking due to external factors like drafts, sunlight, low humidity, fluctuating climatic environmental conditions, temperature stresses variable layer thicknesses, etc. cannot be excluded. These are not causes for a claim.
- Also cracks due to creep or shrinkage deformations of the underlying cement subsurface of SikaScreed® HardTop-60 cannot be absorbed. Existing joints from the substrate depending on static conditions must professionally be sealed rigid or carried from the substrate.
- Opened bags have to be used immediately. Storage must be protected from moisture. Moisture can have a negative affect for the reactivity, before end of the shelf life.
- Can be used externally, when overcoated with a resin topcoat.
- Not suitable for external use without protection.

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.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

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.

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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SikaScreedHardTop-60_en_GB_(10-2017)_3_2.pdf

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October 2017, Version 03.02

020815020010000054