BUILDING TRUST

PRODUCT DATA SHEET

SikaScreed® HardTop-60

Cementitious, rapid-hardening, high-strength floor levelling screed

PRODUCT DESCRIPTION

SikaScreed® HardTop-60 is a one-part cementitious floor levelling screed and repair mortar for industrial floors that hardens rapidly. It provides a high-strength, low-maintenance, highly mechanical and abrasion-resistant smooth screed that is suitable as a finished surface or a base layer for resin-based coatings.

USES

SikaScreed® HardTop-60 is used as a:
- Repair and levelling screed for large-area industrial floors
- Bonded, unbonded and floating screed wearing layer
- Bonded, unbonded and floating screed base layer for resin top coats
- Final trafficable screed wearing layer

Please note:
- The Product may only be used by experienced professionals.

CHARACTERISTICS / ADVANTAGES

- Rapid-hardening screed and repair mortar
- Long time period for surface finishing: more than 60 minutes
- Usable after 24 hours' hardening
- Pre-batched, one-part mortar that only needs the addition of water
- Low maintenance
- Easy to apply and lay as a monolithic flat floor finish or on a slope
- Very good mechanical and wear resistance
- Suitable for use with underfloor heating systems
- Sikafloor®-140 W Troweling Primer is used to increase surface durability
- Priming or first layer of epoxy, PU or hybrid flooring systems can be applied 2–48 hours after the end of trowelling without shotblasting
- Suitable for exterior use if overcoated with a waterproof coating or screed.

ENVIRONMENTAL INFORMATION

- Contributes towards satisfying Materials and Resources (MR) Credit: Building product disclosure and optimization — Environmental Product Declarations under LEED® v4
- Contributes towards satisfying Materials and Resources (MR) Credit: Building Product Disclosure and Optimization — Material Ingredients under LEED® v4
- VOC emission classification GEV Emicode EC1^{plus}
- Environmental Product Declaration (EPD) in accordance with EN 15804. EPD independently verified by Institut für Bauen und Umwelt e.V. (IBU)

APPROVALS / STANDARDS

- CE marking and declaration of performance based on EN 13813:2002 Screed material and floor screeds — Screed material — Properties and requirements — Cementitious screed material

PRODUCT INFORMATION

Chemical Base	Special cement-based powder with hard aggregates		
Packaging	Standard bag	25 kg	
	Bulk bag	1000 kg	
	Refer to the current price list for available packaging variations.		
Shelf Life	12 months from date of production		
Storage Conditions	The Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to the packaging. Refer to the current Safety Data Sheet for information on safe handling and storage.		
Appearance / Colour	Smooth, grey finish		
Maximum Grain Size	3.2 mm		
Bulk Density	1.5 kg/m³		(ISO 697)

TECHNICAL INFORMATION

Abrasion Resistance	A6	≤ 6 cm³ / 50 cm²	Böhme	(EN 13892-3)
	Performed on a power-floated surface			
Compressive Strength	Conditioned 24 h at +20 °C	35 N/mm²		(EN 196-1)
	Conditioned 28 d at +20 °C	60 N/mm²		
Flexural Strength	Conditioned 24 h at +20 °C	4 N/mm²		(EN 196-1)
	Conditioned 28 d at +20 °C	7 N/mm²		
Service Temperature	Maximum	+45 °C		
Service Temperature	Minimum	20 %		
Reaction to Fire	A1			(EN 13501-1)

APPLICATION INFORMATION

Fresh mortar density	2.25 kg/l		(EN 1015-6)
Consumption	2.05 kg/m² per mm of thickness Note: Consumption data is theoretical and does not allow for any additional material due to surface porosity, surface profile, variations in level, wastage or any other variations. Apply the Product to a test area to calculate the exact consumption for the specific substrate conditions and proposed application equipment.		
Layer Thickness	Maximum	80 mm	
	Minimum	8 mm	
	MINIMUM THICKNESS GUIDELINES		
	Bonded screed and repairs	8 mm	
	Unbonded screed and repairs	40 mm	
	Floating screed	40 mm	
	The minimum thickness of a floating screed is influenced by the following factors: ▪ The load and use of the floor ▪ The presence of an underfloor heating system The indicated minimum thickness is valid for a floor with light loading, without underfloor heating system.		

Product Temperature	Maximum	+25 °C fresh mortar
	Minimum	+10 °C
Ambient Air Temperature	Maximum	+30 °C
	Minimum	+10 °C
Mixing Ratio	Pourable consistency	2.8–3.0 L per 25 kg bag
Substrate Temperature	Maximum	+25 °C
	Minimum	+10 °C
Pot Life	At +20 °C	30 min
Applied Product Ready for Use	18 hours without coating or impregnation application. Time is approximate and measured at +20 °C and > 50 % relative humidity. 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 Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

FURTHER DOCUMENTS

Reference must be made to the following System Data Sheets:
- Sikafloor® HardTop CM-60 Rapid
- Sikafloor® HardTop CS-56 TrowelFinish
- Sikafloor® HardTop CS-56 StainProtect
- Sikafloor® HardTop CS-56 ColourSeal

Reference must be made to the following Sika® Method Statements:
- Method Statement HardTop- 60/70 fast screed systems
- Sika Method Statement — Sikafloor® mixing and application
- Sika Method Statement — Evaluation and preparation of surfaces for flooring systems

ECOLOGY, HEALTH AND SAFETY

Local safety regulations must be observed and it advisable to wear PPI when working with this product with particular attention paid to cutting and handling. Transportation Class: The product is not classified as hazardous good for transport. Disposal: The material is recyclable. Disposal must be according to local regulations. Please contact your local Sika sales organisation for more information.

APPLICATION INSTRUCTIONS

EQUIPMENT

Select the most appropriate equipment required for the project.

SUBSTRATE PREPARATION
- Abrasive blast cleaning, planing or scarifying equipment

MIXING

Small to medium volumes
- Mixing containers
- Weighing scales
- Water containers
- Water-measuring container
- Double spiral mix paddle and drill (< 500 rpm)
- Forced action mixer or rotating pan, paddle or trough type mixers.

Large volumes
- Weighing scales
- Water containers
- Water-measuring container
- Forced action mixer or rotating pan, paddle or trough type mixers.
- Continuous mortar mixer and integrated delivery pump with associated hoses. Ask Sika Technical Services for further details.

APPLICATION
- Mixed material carriers such as wheelbarrows
- Spreading equipment
- Height levelling equipment
- Screed bar or straight edge
- Screed rails

SURFACE FINISHING
- Hand trowels
- Walk-behind power trowels (disc and blade types)
- Finishing brooms

CURING
- Polyethylene sheeting

SUBSTRATE QUALITY

Cementitious substrates must be structurally sound and of sufficient compressive strength (minimum 25 N/mm^2) with a minimum tensile strength of 1.5 N/mm^2.

The substrate must be sound, clean, free from all contaminants such as dirt, oil, grease, loose friable material, cement laitance, coatings and other surface treatments.

SUBSTRATE PREPARATION

IMPORTANT
Surface defects due to voids in the substrate
Voids and blow holes in the substrate will weaken the surface and damage the covering Product if not repaired during the preparation process.
1. Fully expose blow holes and voids during surface preparation to identify the required repairs.

IMPORTANT
Reduced service life due to incorrect treatment of cracks
The incorrect assessment and treatment of cracks may lead to a reduced service life and reflective cracking.
1. For static cracks, ensure the width is suitable for overcoating with SikaScreed® HardTop-60.
2. For dynamic cracks, ensure the movement is within the movement capacity of SikaScreed® HardTop-60.

TREATMENT OF CRACKS AND JOINTS
1. Use Sikadur® or Sikafloor® resins to fill all construction joints and existing static surface cracks in the substrate before full layer application.
2. Continue existing movement joints into the new floor screed.

BONDED SCREED
For the application of SikaScreed®-20 EBB, prepare concrete and cementitious substrates to a minimum substrate roughness of 0.5 mm according to EN 1766 or ≥ CSP 3 (International Concrete Repair Institute) or equivalent.
1. Remove weak cementitious substrates and contaminants such as dirt, grease and oil.
2. IMPORTANT The final texture of the substrate must be open-textured and gripping. Prepare cementitious substrates mechanically using abrasive blast cleaning, planing or scarifying equipment to remove cement laitance.
3. Before applying the Product, remove all dust, loose and friable material from the application surface with an industrial vacuuming equipment.
4. Prime all construction joints, vertical connections, cutting edges or connections to third-party components such as shafts, rails and profiles with SikaScreed®-20 EBB.
5. Perform preliminary site trials incorporating adhesion pull-off tests to confirm that substrate and Product tensile adhesion strengths are acceptable for the application.

UNBONDED SCREED
Refer to Method Statement HardTop- 60/70 fast screed systems.

FLOATING SCREED
Refer to Method Statement HardTop- 60/70 fast screed systems.

MIXING

IMPORTANT
Unsuitable mixing equipment
Unsuitable mixing equipment will not combine the mix thoroughly or entrain too much air into the mix.
1. Do not use free fall mixers.

IMPORTANT
Incompatibility with Portland cement
The Product is a special cement binder-based mortar which can expand in contact with standard Portland cements before it has fully cured.
1. Do not use mixing equipment for SikaScreed® HardTop materials that has previously mixed other cement-based mortars.

IMPORTANT
Poor product performance due to exposure of uncured Product to atmospheric moisture
Exposure of the Product to atmospheric moisture will reduce reactivity and affect the cured product performance.
1. Use opened bags immediately.

SMALL TO MEDIUM VOLUMES
1. Pour the minimum recommended clean water quantity into a suitable mixing container.
2. While stirring slowly with electric paddle mixer, add the powder to the water and mix thoroughly for at least for 3 minutes.
3. Additional water can be added up to the maximum specified amount to adjust the consistency to achieve a smooth consistent mix.
4. Check the consistency after every mix.

LARGE VOLUMES
1. Pour the minimum recommended clean water quantity into the forced action mixer or rotating pan or continuous mortar mixer and integral delivery pump.
2. Add the powder to the water and mix thoroughly for at least for 3 minutes to achieve a smooth consistent mix.
3. Check the consistency and record results in a jobsite quality control plan.
4. Compare mixing consistency with drill and mixing paddle technique.

APPLICATION

IMPORTANT
Strictly follow installation procedures
Strictly follow installation procedures as defined in Method Statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

IMPORTANT
Surface cracking due to rapid moisture loss
In draughty areas, open spaces, at temperatures between +10 °C and +15 °C or in very dry climates early plastic shrinkage cracks may occur.
1. Confirm substrate moisture content, product, substrate and air temperatures prior to application.

IMPORTANT
Application at unsuitable temperatures
Lower or higher material and substrate temperatures, layer thickness and water content significantly slow down or accelerate the trowelling time. Low temperatures can affect the setting and may lead to reduced performance. High temperatures and low humidity can cause cracking and crazing.

1. Do not apply the Product at temperatures lower than +10 °C.
2. Do not apply the Product at temperatures higher than +25 °C, in direct sunlight, hot or strong winds or low humidity. Keep the substrate, dry mortar and water cool and within the temperature limits stated.
3. Keep the floor laying operation as clean and protected from the environment as possible.

IMPORTANT

Damage due to permanent water contact

The Product is not watertight and completely crack-free.

1. Do not use the Product for applications with permanent water contact or immersion.

IMPORTANT

Damage due to water penetration

The Product may be damaged in external applications if water penetrates the screed and freezes.

1. On external applications apply a coating to protect the Product.

Carbonation of reinforcement

Note: Coverage of the reinforcement with the Product must not be considered as carbonation protection.

BONDED, UNBONDED AND FLOATING SCREEDS

1. IMPORTANT If the bonding agent for a bonded screed has dried, remove it mechanically and replace it before applying the Product.Apply the Product wet-on-wet within 30 minutes of mixing (+20 °C).
2. Apply the Product evenly to the required thickness using appropriate spreading equipment.
3. Level the surface with a screed bar or straight edge.

SURFACE FINISHING

Surface finishing equipment

Note: Lightweight floating equipment with large-diameter blades provides better results than heavy equipment with small-diameter blades.

Activity	Time at +20 °C
Start finishing or smoothing	1.5–3 hours after laying
Finishing time	Comparable to concrete

Perform finishing to the required surface texture using finishing tools.

1. IMPORTANT Do not use heavy ride-on trowelling machines. Do not spray water onto the surface while finishing.Finish the Product with suitable equipment such as trowels or walk-behind power floats.
2. Float the surface several times up to a very smooth surface to achieve high abrasion resistance values. Note For this requirement, carry out the initial finishing process using a disc power float. Use a walk behind helicopter or blade type power float for extended surface finishing. Use hand trowels for small areas which are difficult to access and where optimum surface strength is not required.
3. Apply a finishing aid. Use Sikafloor®-140 W Troweling Primer before or during powerfloating to improve the quality of the surface if subsequently applying a resin primer.

CURING TREATMENT

IMPORTANT

Loss of coating adhesion due to contaminated surfaces

After curing protect against contamination using polyethylene sheeting before the application of a surface treatment

1. After curing and before applying a surface treatment, protect surfaces from contamination using polyethylene sheeting.

Refer to the appropriate System Data Sheet.

COATED SCREEDS

1. Start curing after the last finishing operation.
2. IMPORTANT Do not shotblast the surface of the screed. Apply either Sikafloor®-151 or Sikafloor®-161 to the surface of the Product within 2–48 hours of completing the surface finishing process.
3. Broadcast the surface of the resin with 0.3–0.8 mm or 0.7–1.2 mm quartz sand.

UNCOATED SCREEDS

1. Start curing after the last finishing operation.
2. Cure the Product with a polyethylene sheet.
3. IMPORTANT The ambient and subfloor temperature during application and setting of the Product must be always ≥ +10 °C. Maintain curing with polyethylene sheeting based on substrate and air temperature, according to the table.

Substrate and air temperature	Minimum time
+10 °C to +15 °C	36 hours
> +15 °C	18 hours

CLEANING OF TOOLS

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

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

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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