

PRODUCT DATA SHEET

SikaScreed® K Rapid

FAST DRYING SCREEDING ADDITIVE

PRODUCT DESCRIPTION

SikaScreed® K Rapid screeding additive for site batched screeds is used to quickly reduce the level of retained moisture within the screed allowing floor coverings to be laid over the screed much sooner than with conventional screeds. SikaScreed® K Rapid gains strength quickly, facilitating early access by following trades. SikaScreed® K Rapid is supplied as a concentrate and used in low dilution. It promotes rapid drying and a reduced waiting time prior to the application of floor coverings such as sheet vinyl, tiles and other materials including the range of Sikafloor® products.

USES

SikaScreed® K Rapid screeds are suitable for both commercial and industrial high traffic fast track applications where a final floor finish is required.

SikaScreed® K Rapid screeds can be laid in the following situations:

- over concrete slabs
- over existing screeds
- on to damp proof membranes, minimum thickness 35mm bonded to Sikadur®-32 unbonded 50mm minimum on bitumen or sheet membranes.
- on insulating board (minimum thickness 65mm)
- unbonded (minimum thickness 50mm)

CHARACTERISTICS / ADVANTAGES

- Will accept foot traffic after 24 hours @ 20 °C
- Compatible with the Sikafloor® range of resins
- Rapid drying—can receive floor coverings such as vinyl, tiles and carpet after 8 days at 50mm thick and 15 days at 75mm
- Rapid early strength development
- Liquid admixture disperses quickly and fully in the gauging liquid
- Apply as a bonded screed from 35mm, unbonded from 50mm and floating from 65mm
- Compatible with underfloor heating
- Compressive strength in excess of 40N/mm² can be achieved after 28 days, see mix design
- Suitable for screed pumps
- Concentrated admixture saves packaging waste

APPROVALS / STANDARDS

Admixtures for concrete, mortar and grout. Admixtures for masonry mortar. Definitions, requirements, conformity, marking and labelling according to BS EN 934-3, Declaration of Performance 67599917, certified by notified factory production control certification body 0086, certificate of conformity of the factory production control 0836-CPR-13/F043, and provided with the CE marking.

PRODUCT INFORMATION

Packaging	20 Litre, 210 Litre and 1000 Litre units
Appearance / Colour	Liquid
Shelf Life	9 months from date of production.
Storage Conditions	The package must be stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5°C and +30°C.

TECHNICAL INFORMATION

Specific Advice

Physical Properties:

Compressive Strength

1 day	23 N/mm ²
28 day	48 N/mm ²

The above are typical laboratory results @ 20°C. Site strengths will be lower.

Approximate Yield:

Required Per m ² at 50mm	0.5 Litres
Required Per m ² at 75mm	0.75 Litres
Required Per m ³	10 Litres

Curing Conditions

Drying Time:

50mm Screed	3 days	80 % RH
	6 days	78 % RH
	8 days	74 % RH
75mm Screed	3 days	86 % RH
	7 days	82 % RH
	11 days	77 % RH
	15 days	75 % RH

The accepted relative humidity at the surface of a screed for the laying of resin or vinyl floor coverings, tiles etc is 75%.

	+20 °C
Working Time	~45 min
Curing Under Polythene	24 Hours
Light Foot Traffic	24 Hours
Full Traffic	5 Days
Floor Finish Overlay	8 Days (50mm Screed) 15 Days (75mm Screed)

The data is based on drying @ 20°C and 60% relative humidity. Low temperature, high humidity, increased screed thickness and changing the mix design will delay drying. If the screed is covered with a curing membrane such as polythene, then the drying time starts when the membrane is removed. The relative humidity (RH) at the surface of the screed should be measured with a hygrometer before proceeding to lay floor coverings. Standard practices should be followed.

Drying concrete must be separated from the screed by polythene damp proof membrane or Sikadur®-32. Screeds thicker than those referred to will take longer to dry out. Screeds which are wetted during their application or curing will take longer to dry out. Note that SikaScreed® K Rapid screeds are designed to be covered with resin, carpet, vinyl, tiles or other coverings and are not designed as wearing screeds or toppings.

SYSTEM INFORMATION

Compatibility

Screed Types:

SikaScreed® K Rapid screeds can be laid either bonded, unbonded or floating, determined by the substrate type. Bonded screeds must be laid on to a suitably prepared substrate (see Surface Preparation). Unbonded screeds are those laid on a separating layer or preformed sheet damp proof membrane. Floating screeds are those laid on to an insulation board.

Bonded Screed (from 35mm)

- suitable substrate, mechanically prepared
- prime with Sikadur®-32

Bonded Screed (from 50mm)

- suitable substrate, mechanically prepared
- prime with cement : water (2:1) or Sikadur®-32

Unbonded Screed (from 50mm)

- solid substrate with polythene or other suitable slip membrane

Floating Screed (65mm)

- Light duty use
- insulation board

Floating Screed (75mm)

- Heavy duty use
- insulation board

Damp Proof Membrane:

A damp proof membrane should be present under the concrete slab to prevent moisture penetration from below. If no membrane is present or if the concrete is drying, apply two coats of Sikadur®-32 or install a sheet or similar membrane. If Sikadur®-32 is laid on to a clean, sound and correctly prepared substrate as specified in the Sikadur®-32 product data sheet it is possible to lay SikaScreed® K Rapid at a minimum thickness of 35mm, bonded to the Sikadur®-32.

APPLICATION INFORMATION

Recommended Dosage

The basic components of a SikaScreed® K Rapid screed are Portland cement (CEM II 42.5), 0/4mm screeding sand, SikaScreed® K Rapid and clean water, the water content shown in mix designs must be adhered to, dry mixes will fail to fully hydrate the cement. Larger sized aggregates are used for concrete or granolithic finishes; see Table 4 of BS882.

A SikaScreed® K Rapid Mix as outlined below yields approximately 0.1m³. The density of the cured screed is approximately 2300kg/m³. This mix design can be extended to 1:4 (cement: sand) by weight if preferred, but strength will be reduced and drying time will be extended.

Portland cement (CEM II 42.5)	50kg
0/4mm Screeding Sand	150kg
SikaScreed® K Rapid	1 litre
Water	Up to 18 litres
Yield per mix	0.1m ³

Note that water addition will depend on aggregate water content.

Surface Preparation:

The surface on to which a SikaScreed® K Rapid screed is to be bonded must be clean, structurally sound and stable. All grease, oil, laitance and loose material must be removed. The surface must be keyed to expose the aggregate and to provide good adhesion. This is best achieved by scabbling, planing or shot blasting. The prepared surface must be cleaned (ideally by vacuum), and if Sikadur®-32 is not being used, damped with clean water and excess water removed.

Mixing:

SikaScreed® K Rapid must be mixed using a forced action mixer. Dry mix the cement and sand then add the SikaScreed® K Rapid liquid followed by sufficient clean water to produce a workable mix and fully hydrate the cement. The screeder should be able to make a ball of the mixed mortar and pull it apart without crumbling of the mortar.

Priming:

For bonded screeds up to 50mm thickness a coat of Sikadur®-32 should be brushed in to the clean and dry surface. Alternatively for bonded screeds greater than 50mm the prepared surface must be thoroughly dampened with clean water and the water allowed to soak in (SSD), excess water must be removed and a 2:1 cement/water slurry applied. In either instance before the chosen primer dries the screed must be laid. If Sikadur®-32 is allowed to harden it will require light abrasion and solvent wiping prior to reapplication. If the cementitious bonding coat dries it must be vigorously scratched and reapplied.

Laying:

Standard screeding practices should be followed. The mortar must be placed as soon as possible after mixing and well consolidated. Conventional tools such as float and trowel are used to obtain the desired surface finish.

Embedded Conduits and Pipes:

When laying conduits or pipes within SikaScreed® K Rapid screeds the conduit or pipe should be a minimum of 25mm beneath the top surface. It is advisable to incorporate reinforcing mesh centrally within the depth of the screed over the conduit or pipe, extending for not less than 150mm each side to minimise the risk of cracking.

Joints:

Bay proportions should not exceed 1.5:1 length to width, joints should be positioned as follows:

- Construction joints in the substrate must be expressed through into the screed
- Movement joints in the substrate must be expressed through into the screed
- When laying on suspended floors, movement joints should be installed in the screed over support positions to accommodate movement
- Isolation joints should be installed around the perimeter of the floor and around columns, manholes and fixed spaces to accommodate movement
- Heated screeds may require movement joints positioned to limit screed bays to a maximum of 40m² with a maximum bay length of 8m. This applies when rigid floorings and some types of resilient flooring are to be applied.
- Separate heating zones should be divided by expansion joints

Curing:

Curing must commence as soon as possible after finishing the screed. Cure the screed with tight fitting polythene, placed on to the screed as early as possible without damaging the surface. Cover for 24 hours then remove and air cure.

Pumping:

SikaScreed® K Rapid modified screeds can be pumped to the point of laying. Tests have been conducted using Putzmeister equipment and specific guidance should be sought from Sika's Technical Department.

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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