



Specialist Construction Supplies for Repair, Maintenance, Building & Infrastructure

Sikaset 45 Data Sheet

Specification notes

Product: **Sikaset 45**

Supplier:

Arcon Construction Supplies
19-20 Prestwood Court
Leacroft Road
Warrington
WA3 6SB

Tel: **01925 852225**

Email: mail@arconsupplies.co.uk

Web: www.arconsupplies.co.uk

Call **01925 852225** or visit [Arcon Construction Supplies](http://www.arconconstruction.com)
... for more information on our flooring and construction products

[Industrial Flooring](#) | [Concrete Repairs](#) | [Protective and Waterproof Coatings](#)
[Jointing and Paving Mortars](#) | [Anti-slip Floor Paints](#) | [Concrete Repair Mortars](#)



SikaSet® 45

Rapid Hardening Early Strength Repair/Bedding Mortar

Technical Data Sheet

DESCRIPTION

SikaSet 45 is a one component magnesia phosphate based, rapid hardening and high early strength concrete repair and ironwork bedding mortar.

USES

- * Rapid repair mortar for horizontal concrete surfaces
- * Industrial floors, roads, runways, bridge decks and car park decks
- * Filling mortar for voids and honeycombed areas in concrete
- * Bedding mortar for inspection chambers, manhole covers, gully grates, stanchion posts, street furniture

ADVANTAGES

- * Easy to use, just add water
- * Can be placed at sub zero temperatures
- * Good unprimed adhesion
- * High early age and ultimate strengths
- * Shrinkage compensated mortar
- * Traffickable within 1 hour
- * Increased resistance to de-icing salts
- * Non corrosive to steel
- * Durable freeze/thaw resistance
- * Can be overcoated

Technical Data (typical)

Mixed colour:	Concrete grey
Mixed wet density:	2.2 kg/litre
Application temperature:	-20°C min, +25°C max (Substrate and ambient)
Application thickness per layer:	10.0 mm minimum 50.0 mm maximum
Mix ratio:	1.5-1.8 litres of water
Bedding mortar	1.5 litres per 25kg bag
Repair mortar	1.8 litres per 25kg bag

MECHANICAL PROPERTIES

Compressive strength:	30 mins	60 mins	120 mins	
@ 21°C (BS 1881)	15 N/mm ²	25 N/mm ²	30 N/mm ²	
	1 day	7 days	28 days	
	40 N/mm ²	45 N/mm ²	52 N/mm ²	
@5°C (BS 1881)	60 mins	1 day	7 days	28 days
	15 N/mm ²	40 N/mm ²	55 N/mm ²	60 N/mm ²
Flexural strength:				
28 days @ 20°C		9 N/mm ²		
Shrinkage:				
28 days		<0.02%		
'Working time':				
(@20°C)		6 minutes		

All above values are approximate.

CONCRETE SUBSTRATE PREPARATION

Breakout and remove all concrete designated as being defective, loose and unsound, using suitable mechanical equipment.

Ensure sufficient concrete is removed from around reinforcement to allow priming of the steelwork and compaction of the repair material.

At the repair locations, feather edging should be avoided. The edges should be square cut to at least the recommended minimum application thickness of the repair material. Where a saw cut is employed, the substrate should be roughened mechanically to provide a 'key' between the repair mortar and substrate.

REINFORCEMENT AND IRONWORK PREPARATION

All exposed reinforcement should be thoroughly prepared to clean, bright metal, using abrasive blast cleaning or other approved methods.

STEEL REINFORCEMENT PRIMING

Where required, prior to applying **SikaSet 45** into the repair area, apply two coats of **SikaTop® Armatec 110 EpoCem** onto the reinforcement in accordance with the product technical data sheet.

MIXING

SikaSet 45 repair mortar should be mechanically mixed using a forced action mixer or in a clean drum using a drill and paddle. A normal concrete mixer is NOT suitable.

Mix **SikaSet 45** with water for at least 3 minutes to achieve a uniform consistency. Immediately apply the mortar.

APPLICATION

The prepared substrate should be thoroughly soaked with clean water until uniformly saturated leaving no standing water.

The mixed mortar must be worked well into the prepared and pre-wetted substrate by gloved hand or trowel, filling all voids ensuring full encapsulation around exposed reinforcement. For maximum bond between existing concrete and the mortar when used for horizontal traffickable repairs. It is recommended that a bonding bridge consisting of a slurry produced by adding a small amount of water to the mix and brushed into the substrate is used (trial recommended). Apply mortar wet on wet and compact well. Apply in layers not less than the minimum thickness and no greater than the maximum thickness. Where multiple layers are required the previous layers should be keyed and allowed to initially set prior to proceeding. For depths greater than 50mm a 10mm single sized coarse aggregate, complying with BS882 grading limits, may be added upto a rate of 10kg per 25kg of **SikaSet 45** and remixed. Additional aggregates must be clean, saturated but surface dry, preferably low absorption and round in shape. Under no circumstances should admixtures or cement be added.

The final layer may be levelled using a steel/wooden tamp or straight edge where required. **SikaSet 45** is best finished with minimal working using a wood/plastic float or a damp sponge, after initial set has taken place to obtain the required surface texture.

IMPORTANT CONSIDERATIONS

CURING

Finished areas will normally require curing owing to the rapid setting nature of **SikaSet 45**. However, where rain, or excessively hot, dry or windy conditions prevail, cover after application using hessian or polythene sheeting taped down at the edges or other approved method. For cold weather working also use insulation to maintain temperatures.

- ★ Large/deep repairs may be subject to shrinkage and cracking. This may be minimised by limiting repair volumes and reducing layer thicknesses.
- ★ Do not add water over recommended dosage.
- ★ For cold weather working below 5°C, preheat mixing equipment and gauging water to a temperature of 25-30°C.
- ★ Do not place onto frozen surfaces. Defrost surfaces using heaters.
- ★ Apply only to prepared, sound substrates.
- ★ Allow mortar to initially harden between applications.
- ★ For hot weather working above 30°C keep mixing equipment cool by working in the shade and chill gauging water to a temperature of 5°C.
- ★ Do not re-work once the material has started to harden.
- ★ Protect freshly applied material from freezing.

CLEANING

Remove **SikaSet 45** from tools and equipment with water. Hardened material can only be removed mechanically.

PACKAGING

25kg plastic lined paper sacks.

CONSUMPTION

2.2 kg/m²/mm (2.2 kg/litre)
Excluding allowances for loss wastage, surface profile and porosity.

STORAGE AND SHELF LIFE

Minimum 6 months in unopened original sealed containers stored in dry warehouse conditions (+5°C - +25°C).

Handling Precautions

Sika products are generally harmless provided that certain precautions normally taken when handling chemicals are observed. The materials must not, for instance, be allowed to come in contact with foodstuffs or food utensils and measures should also be taken to prevent the uncured materials from coming in contact with the skin, since people with particularly sensitive skin may be affected. The use of protective clothing, goggles, barrier creams and rubber gloves is required. The skin should be thoroughly cleaned at the end of each working period either by washing with soap and warm water or by using a resin-removing cream - the use of powerful solvents is to be avoided. Disposable paper towels - not cloth towels - should be used to dry the skin. Adequate ventilation of the working area is recommended. In case of accidental eye or mouth contact, flush with water - consult a doctor immediately. Health and Safety information on Sika Products is available and we strongly advise that this is read prior to their use. Sika products are for professional use and should be stored in sealed containers away from the reach of children.

Important Note

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 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 proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.

Please consult our Technical Sales Department for further information

SIKA LIMITED

Watchmead, Welwyn Garden City, Hertfordshire, AL7 1BQ

Tel: 01707 394444 Email: sika@uk.sika.com

Fax: 01707 329129 www.sika.co.uk



ISO 14001



Created with



professional

download the free trial online at nitropdf.com/professional