

Product Data Sheet
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SikaRep® Microcrete-4

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Ready to use non-shrink, cementitious micro concrete

Product Description	SikaRep® Microcrete-4 is factory designed pourable, non shrink, repair concrete with selected cement, aggregate and other chemicals. Recommended water and coarse aggregate to be added at site as per requirement.
Uses	SikaRep® Microcrete-4 is mainly recommended for the repair of damaged concrete structures e.g. <ul style="list-style-type: none">■ Columns■ Beams■ Slabs, etc.■ It is also recommended for grouting of large gaps.
Characteristics / Advantages	<ul style="list-style-type: none">■ A properly designed concrete which can be pumped or poured into restricted■ Placement without any vibration.■ Expansion system compensates for shrinkage settlement in plastic stage.■ Easy to mix and apply, high flow characteristic, rapid strength development,■ good bond with old concrete■ Contains no added chloride

Product Data

Form

Appearance / Colour Grey powder

Packaging 30 kg bags.

Storage

Storage Conditions / Shelf-Life 6 months from date of production if stored properly in undamaged and unopened, original sealed packaging, in dry conditions at temperatures between +5°C and +40°C. Protect from moisture, direct sunlight and frost.

Technical Data

Standards ASTM C1107

Bulk Density 1.2 kg/l (of fresh mortar)

Construction



Mechanical / Physical Properties

Compressive Strength	Ambient temperature: +30°C		(According to ASTM C 109 , 70mm Cube)	
	1 day	3 days	7 days	28 days
	~25 N/mm ²	~35 N/mm ²	~45 N/mm ²	~65 N/mm ²

Flexural Strength	Ambient temperature: +30°C		(According to ASTM C 293-79)	
	7 days		28 days	
	~7 N/mm ²		~8 N/mm ²	

System Information

Application Details

Consumption	~2200 kg / m ³ At water: powder ratio 0.14
Substrate Preparation	All concrete surfaces should be clean, sound and free from loose particles, oil, grease, etc. Metal surfaces should be scale, rust, oil and grease.

Application Instructions

Mixing	Water: Powder = 0.14 to 0.16 by weight (4.2 l to 4.8 l water per 30 kg bag) dependent on the desired flow.
Mixing Time	5 minutes minimum
Mixing Tool	<p>SikaRep[®] Microcrete-4 can be mixed both in paddle type and slow speed grouting mixture or drum type concrete mixer. In both the cases the SikaRep[®] Microcrete-4 is to be added to water and mix till a pourable consistency is obtained with recommended water –powder ratio as per technical data.</p> <p>Put around 80 to 90% of required water in the mixing drum, followed by SikaRep[®] Microcrete-4 and then add the balance water.</p> <p>Do not mix more material, which cannot be used within Pot Life. DO NOT ADD EXTRA WATER.</p>
Application Method/ Tools	<p>Pour the SikaRep[®] Microcrete-4 after mixing into the area to be covered /filled. During filling if required, ensure proper air displacement.</p> <p>Note: Concrete can also be produced with addition of 10mm down aggregate in proportion of 2:1 (SikaRep[®] Microcrete-4: Coarse Aggregate) by weight.</p>
Cleaning of Tools	Clean all tools and application equipment with water immediately after use. Hardened / cured material can only be removed mechanically.
Notes on Application / Limitations	<p>When ready to pour SikaRep[®] Microcrete-4 is workable for 20 minutes after mixing at +30°C).</p> <p>Ensure formwork is secure and watertight to prevent movement and leaking during placing and curing.</p> <p>Use chilled water for mixing in case of high ambient temperature.</p> <p>Use hot water for mixing in case of very low ambient temperature.</p> <p>In case using without addition of aggregates, not more than 100mm of layer thickness shall be poured.</p> <p>For additional technical information on SikaRep[®] Microcrete-4 or other materials contact the technical services department.</p>

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.

Health and 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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