

## PRODUCT DATA SHEET

# SikaRep<sup>®</sup> Microcrete-4

READY TO USE NON-SHRINK, CEMENTITIOUS MICRO CONCRETE

### DESCRIPTION

SikaRep<sup>®</sup> 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<sup>®</sup> Microcrete-4 is suitable for structural repairs to bridges, columns, etc. It is mainly recommended for the repair of damaged concrete structures e.g.

- Bridge columns and beams
- Concrete piling
- Slabs, etc.
- It is also recommended for grouting of large gaps.

### CHARACTERISTICS / ADVANTAGES

A properly designed concrete which can be pumped of 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
- Impact and vibration resistant
- Placing thickness up to 100 mm
- Contains no added chloride

### APPROVALS / CERTIFICATES

ASTM C1107

### PRODUCT INFORMATION

Packaging	30 kg bags
Appearance / Colour	Grey powder
Shelf life	6 months from date of production
Storage conditions	Store 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 INFORMATION

Compressive Strength	<b>1 day</b>	<b>3 days</b>	<b>7 days</b>	<b>28 days</b>	(ASTM C 109)
	≥ 25 N/mm <sup>2</sup>	≥ 35 N/mm <sup>2</sup>	≥ 45 N/mm <sup>2</sup>	≥ 65 N/mm <sup>2</sup>	
* 70mm Cube * Ambient temperature: +30°C					
Tensile Strength in Flexure	<b>7 days</b>		<b>28 days</b>		(ASTM C 293-79)
	≥ 7 N/mm <sup>2</sup>		≥ 8 N/mm <sup>2</sup>		
* Ambient temperature: +30°C					

## APPLICATION INFORMATION

<b>Mixing Ratio</b>	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 should be minimum 5 minutes.
<b>Fresh Mortar Density</b>	~2.2 kg/l
<b>Consumption</b>	~2200 kg/m <sup>3</sup> (At water: powder ratio 0.14)

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY / PRE-TREATMENT

All concrete surfaces should be clean, sound and free from loose particles, oil, grease, etc. Metal surfaces should be scale, rust, oil and grease.

### MIXING

SikaRep<sup>®</sup> 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<sup>®</sup> 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. Put around 80 to 90% of required water in the mixing drum, followed by SikaRep<sup>®</sup> Microcrete-4 and then add the balance water. Do not mix more material, which cannot be used within Pot Life. DO NOT ADD EXTRA WATER.

### APPLICATION

Pour the SikaRep<sup>®</sup> Microcrete-4 after mixing into the area to be covered /filled. During filling if required, ensure proper air displacement.

Note: Concrete can also be produced with addition of 10mm down aggregate in proportion of 2:1 (SikaRep<sup>®</sup> Microcrete-4: Coarse Aggregate) by weight.

### CURING TREATMENT

Exposed surfaces should be kept to a minimum and cured with appropriate curing methods as soon as the mortar has hardened. The formwork can be stripped after at least 3 days. Upon removal of the formwork, cure the repaired areas immediately to protect from premature drying out by suitable measures (keep moist, cover with wet Hessian or with Sika<sup>®</sup> Antisol<sup>®</sup> A-4 curing compound) (consult our Technical Service Department).

### CLEANING OF EQUIPMENT

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

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## IMPORTANT CONSIDERATIONS

For non-structural application, using Sika<sup>®</sup> Latex Power and for structural application, using Sika<sup>®</sup> Hibond as primer is recommended. In case using without addition of aggregates, not more than 100mm of layer thickness shall be poured.

## BASIS OF PRODUCT DATA

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 declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

## 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 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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