

PRODUCT DATA SHEET

Sikacrete[®]-115 HPF

FREE FLOWING, HIGH PERFORMANCE, FIBER REINFORCED, SHRINKAGE COMPENSATED MICRO-CONCRETE

DESCRIPTION

Sikacrete[®]-115 HPF one component, synthetic fiber reinforced, free-flowing, high strength, cement based micro-concrete with low RCP values. Suitable for use in tropical and hot climatic conditions.

USES

- Sikacrete[®]-115 HPF is used for the structural repair of deteriorated concrete.
- It is ideal for casting sections or members where the volumes required are too large for conventional grouts, and too small and inaccessible for normal concreting applications.
- It can be used with cathodic protection repairs.
- A typical application is the re-profiling of damaged concrete members using formwork for both pouring and pumping techniques.
- Suitable for reprofiling of pile tops.

CHARACTERISTICS / ADVANTAGES

- One component, requires only addition of water
- High resistance to chloride permeability
- Easy to mix, apply and finish
- Economical
- Excellent adhesion
- Shrinkage compensated
- Rapid strength development
- Compatible with the properties of typical concrete
- Vapour permeable
- High resistance to freeze/thaw cycling
- Excellent flowability and adjustable consistency
- Non-metallic

PRODUCT INFORMATION

Composition	Mixture of Portland cement, graded aggregates, additives and synthetic fibers
Packaging	25 kg bag
Appearance / Colour	Grey powder
Shelf life	12 months minimum from production date if stored properly in original unopened packaging
Storage conditions	Store in original unopened packaging in cool and dry condition between 5°C and 35 °C. Protect from direct sunlight, heat and condensation.
Maximum Grain Size	~5 mm

TECHNICAL INFORMATION

Compressive Strength	<u>1 day</u>	<u>7 days</u>	<u>28 days</u>	(ASTM C109)*
	w/p=0.11	~25 N/mm ²	~45 N/mm ² ~65 N/mm ²	
*Tested with clamped cubes (50x50x50 mm) at 25°C				
Tensile Strength in Flexure	<u>28 days</u>		(ASTM C348)	
	w/p=0.11	~8 N/mm ²		
Tensile Adhesion Strength	~1.5 N/mm ² (or concrete failure)			(EN 1542)
Chloride Ion Diffusion Resistance	< 1000 coulombs Classification: Very Low RCP			(ASTM C1202)

APPLICATION INFORMATION

Mixing Ratio	2.75 – 3.00 liter of potable water per 25 kg bag 11 -12 % water by weight of powder
Fresh Mortar Density	~2.30 kg/l (at 25°C)
Yield	~12 Liter per 25 kg bag
Layer Thickness	Min. 30mm Max. 300mm
Ambient Air Temperature	+5 °C min. / +35 °C max.
Substrate Temperature	+5 °C min. / +35 °C max.
Pot Life	~60 min (25°C)

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

Concrete:

The concrete shall be thoroughly clean, rough, free from dust, loose material, surface contamination and materials which reduce bond or prevent suction or wetting by repair materials. De-laminated, weak, damaged and deteriorated concrete and where necessary sound concrete shall be removed by suitable means. Absorbent surfaces should be saturated thoroughly with clean water. The application of a suitable bonding agent, such as Sikadur®-32 LP or SikaTop® Armatec®-110 EpoCem®, will improve adhesion on large areas or where particularly dense concrete substrates are involved.

Steel Reinforcement:

Rust, scale, mortar, concrete, dust and other loose and deleterious material which reduces bond or contributes to corrosion shall be removed. Surfaces shall be prepared using abrasive blast cleaning techniques or high pressure water-blasting to SA 2 (ISO 8501-1). Embedded steel reinforcing should be treated with a suitable anticorrosion coating such as SikaTop® Armatec®-110 EpoCem®. Reference shall be made to EN1504-10 for specific requirements.

MIXING

Add water according to the desired consistency into a clean mixing vessel before slowly adding the Sikacrete®-115 HPF powder. Sikacrete®-115 HPF is best mixed in a forced action mixer, for 2 to 3 minutes or until the mix is free of lumps, not longer than 5 minutes. Slow speed drill (maximum 500 rpm) can be also used for mixing. Normal tumble type concrete mixers are not suitable. Do not mix more grout than can be placed within 15 to 20 minutes. Do not add extra water or other ingredients. Mix only full bags for the best result.

APPLICATION

Before pouring let the mixed grout stand for approximately 5 minutes after mixing to allow entrapped air to escape. Pour into the prepared area such that the grout has the shortest distance to travel. Ensure that air displaced by the grout is allowed to escape. When carrying out the base plate grouting, ensure a sufficient head of pressure to keep the mortar flowing. All exposed areas of the mortar surface should be kept as small as possible.

CURING TREATMENT

Treat exposed surfaces with Sika® Antisol® WB curing compound or use other approved curing methods, such as polyethylene sheeting or wet hessian. Do not commence Fogging until final set has been reached.

CLEANING OF EQUIPMENT

Clean equipment and mixer after application with water. Hardened material can only be removed mechanically.

IMPORTANT CONSIDERATIONS

- Ensure formwork is secure and watertight to prevent movement and leaking During placing and curing.
- At high temperatures use chilled water for mixing to keep grout temperature below 30°C.
- In hot weather, pre-condition the bags at room temperature (20-25°C) prior to use .
- Mix only full bags, do not partially mix.
- Do not mix by hand.
- For further information, contact Sika's Technical Department.

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

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.

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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ISO 9001: Sika UAE LLC,
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Sika Saudi Arabia Co. Ltd,
Sika Qatar LLC
ISO 14001: Sika UAE LLC,
Sika Gulf B.S.C. (c),
Sika Saudi Arabia Co. Ltd
OHSAS: Sika UAE LLC,
Sika Gulf B.S.C. (c)

All products are supplied
under a management
system certified to conform
to the requirements of the
quality, environmental and
occupational health &
safety standards ISO 9001,
ISO 14001 and OHSAS
18001.

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