BUILDING TRUST

PRODUCT DATA SHEET

SikaEmaco® S 496 PK

Ultra-high Strength, Non-shrink, Free Flowing Micro-Concrete for Structural Concrete Repairs

DESCRIPTION

SikaEmaco® S 496 PK is a cementitious, pre-bagged, free flowing, one component, non-shrink precision microconcrete with high early and ultimate strength.Suitable for use in hot and tropical climatic conditions.

USES

SikaEmaco® S 496 PK precision micro-concrete is used for repair and grouting in various applications such as:

- Structural repair of deteriorated concrete.
- Columns in precast construction Casting sections or members where the volumes required are too large for conventional grouts, and too small and inaccessible for normal concreting applications.
- Cavities, gaps and recesses.
- Re-profiling of damaged concrete members and re-profiling of pile tops using formwork for both pouring and pumping techniques.

CHARACTERISTICS / ADVANTAGES

SikaEmaco® S 496 PK is an easy to use precision micro-concrete requiring only the addition of water. It offers the following beneficial properties:

- Easy to mix
- Very good flow characteristics
- Adjustable consistency
- Reduced heat of hydration
- Shrinkage compensated
- Very High final strength
- Non-flammable
- Vapour permeable
- Excellent resistance to chloride ion ingress
- Compatible with the properties of typical concrete

PRODUCT INFORMATION

Chemical Base	Portland cement, selected fillers and aggregates, special additives.
Packaging	25 Kg bag
Appearance / Colour	Grey Powder
Shelf Life	Approximately 06 months when stored as above in original sealed bags.
Storage Conditions	Store in original unopened packaging in cool and dry condition between 5°C and 35°C. Protect from direct sunlight, heat and moisture.

TECHNICAL INFORMATION

Compressive Strength	+25°C 1 Day 7 Days 28 Days w/p = 0.15 ≥ 25 N/mm² ≥ 65 N/mm² ≥ 90 N/mm²

APPLICATION INFORMATION

Mixing Ratio	Consistency	L water per 25 kg bag	Water / Powder Ratio
	Flowable	3.25 - 3.75	0.13 - 0.15
Yield	~12.8 L / 25 kg bag		
Layer Thickness	Min. 50 mm per pour Max. 300 mm per pour Note: For repair areas greater than 300 mm thickness, aggregate "bulking" is required.		
Substrate Temperature	+10°C min. / +35°C max.		

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.

USES

LIMITATIONS

- 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 the grout temperature below +32°C.
- In hot weather, base plates and foundations must be shaded from direct sunlight.
- Condition bags below 30°C prior to use.
- When maximum thickness exceeds 300 mm, the addition of dry, clean coarse aggregates is required (Sikadur®-510 AE or SikaEmaco® FL 100) the addition rate should be between 10 to 15 kg per each 25 kg ofthe dry micro-concrete powder. Trials are recommended to confirm suitability of aggregates to be employed.
- For additional information on SikaEmaco® S 496 PK or other grouting materials contact Sika Technical Department.

ECOLOGY HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

Concrete:
The repair area should be regular in shape with no sharp returns or internal corners and should be delinated with a 20 mm deep saw cut. 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 for minimun 24 hours.
The application of a suitable bonding agent, such as Sikadur®-32 LP, Sikadur® ADH 1414 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 2.5 (ISO 8501-1) Embedded steel reinforcing should be treated with a suitable anticorrosion coating such as SikaTop® Armatec®-110 EpoCem® or SikaEmaco®-8100 AP. Reference shall be made to EN 1504-10 for specific requirements.

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.

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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