

PRODUCT DATA SHEET

SikaEmaco® S 466

(formerly MasterEmaco® S 466)

PUMPABLE, FREE FLOWING, SHRINKAGE COMPENSATED MICRO-CONCRETE FOR GROUTING AND REPAIR

PRODUCT DESCRIPTION

SikaEmaco® S 466 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 466 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 reprofiling of pile tops using formwork for both pouring and pumping techniques.

PRODUCT INFORMATION

Chemical Base	Portland cement, selected fillers and aggregates, special additives
Packaging	25, 40 and 50 kg bag
Shelf Life	12 months minimum from date of production
Storage Conditions	Store in original unopened packaging in a cool and dry condition between +5 °C and +35 °C. Protect from direct sunlight, heat and moisture.
Appearance / Color	Grey powder
Maximum Grain Size	~5 mm

CHARACTERISTICS / ADVANTAGES

SikaEmaco® S 466 is an easy to use precision microconcrete requiring only the addition of water. It offers the following beneficial properties:

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

APPROVALS / STANDARDS

SikaEmaco® S 466 follows the main requirements for nonshrink hydraulic cement grout, according to ASTM C1107 and EN 1504

TECHNICAL INFORMATION

Compressive Strength	at 25°C	1 day	7 days	28 days	(BS 1881 Part 116)
	w/p = 0.14	~25 N/mm ²	~45 N/mm ²	≥ 65 N/mm ²	

*Testing cubes 100 x 100 x 100 mm

APPLICATION INFORMATION

Fresh mortar density	~2.29 kg/l (25 °C)												
Coverage	~12.4 L / 25 kg bag, ~19.9 L / 40 kg bag and ~24.9 L / 50 kg bag												
Layer Thickness	Min. 25 mm per pour Max. 150 mm per pour Note: Higher thicknesses in one pour can be achieved by "bulking", please contact Sika Technical Department for advice.												
Ambient Air Temperature	+5 °C min. / +35 °C max.												
Mixing Ratio	<table><thead><tr><th>Consistency</th><th>L of water per bag</th><th>Water / Powder Ratio</th></tr></thead><tbody><tr><td>Flowable</td><td>3.25 - 3.5 per 25 kg bag</td><td>0.13 - 0.14</td></tr><tr><td>Flowable</td><td>5.2 - 5.6 per 40 kg bag</td><td>0.13 - 0.14</td></tr><tr><td>Flowable</td><td>6.5 - 7.0 per 50 kg bag</td><td>0.13 - 0.14</td></tr></tbody></table>	Consistency	L of water per bag	Water / Powder Ratio	Flowable	3.25 - 3.5 per 25 kg bag	0.13 - 0.14	Flowable	5.2 - 5.6 per 40 kg bag	0.13 - 0.14	Flowable	6.5 - 7.0 per 50 kg bag	0.13 - 0.14
Consistency	L of water per bag	Water / Powder Ratio											
Flowable	3.25 - 3.5 per 25 kg bag	0.13 - 0.14											
Flowable	5.2 - 5.6 per 40 kg bag	0.13 - 0.14											
Flowable	6.5 - 7.0 per 50 kg bag	0.13 - 0.14											
Substrate Temperature	+5 °C min. / +35 °C max.												
Pot Life	~45 min (25°C)												

BASIS OF PRODUCT DATA

- Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.
- Internal Reference - Version: MBS_CC-UAE/Em_S466_05_96/v2/11_15/v3/09_19/v4/06_22

LIMITATIONS

- Ensure formwork is secure and watertight to prevent movement and leaking during placing and curing.
- When maximum thickness exceeds 150 mm, consider the use of Sikacrete® -114 AE.
- At high temperatures, use chilled water for mixing to keep the grout temperature below 30 °C.
- In hot weather, base plates and foundations must be shaded from direct sunlight. Condition bags < 30 °C prior to use.
- Depending on requirements and site condition, the addition of dry, single size, clean coarse aggregates is possible ("bulking") up to 100 % by weight of the dry grout powder. Trials are recommended to confirm suitability of aggregates to be employed.
- For additional information on SikaEmaco® S 466 or other grouting materials contact Sika Technical Department.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

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, 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 (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 EN1504-10 for specific requirements.

MIXING

Add water according to the desired consistency into a clean mixing vessel before slowly adding the SikaEmaco® S 466 powder. SikaEmaco® S 466 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.

Note: Always start with minimum recommended quantity of water (water/powder ratio), only if required, gradually add water to desired consistency. Do not exceed maximum allowed limit of water per bag weight.

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

Treatment of exposed surfaces with Sika® Antisol® range curing compound, is highly recommended for large areas of application. Use other approved curing methods such as polyethylene sheeting or wet hessian only for small exposed areas. Do not commence fogging until final set has been reached.

CLEANING OF TOOLS

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

Product Data Sheet

SikaEmaco® S 466

June 2024, Version 01.01

02030200000002188

OTHER RESTRICTIONS

See Legal Disclaimer.

LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

Sale of SIKA products are subject to the Terms and Conditions of Sale which are available at <https://usa.sika.com/en/group/SikaCorp/termsandconditions.html> or by calling 1-800-933-7452.

Sika Corporation

201 Polito Avenue
Lyndhurst, NJ 07071
Phone: +1-800-933-7452
Fax: +1-201-933-6225
usa.sika.com



Product Data Sheet

SikaEmaco® S 466
June 2024, Version 01.01
02030200000002188

SikaEmacoS466-en-US-(06-2024)-1-1.pdf

