



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, factory-bagged, free-flowing, one-component, non-shrink precision micro-concrete with high early and ultimate strength. SikaEmaco[®] S 466 is suitable for use in hot and tropical climatic conditions.

WHERE TO USE

SikaEmaco[®] S 466 is a precision micro-concrete 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

CSC MasterFormat[®]

CSC Master Format[™] 03 31 23 - HIGH-PERFORMANCE STRUCTURAL CONCRETE

Composition / Manufacturing

Portland cement, selected fillers and aggregates, special additives

Packaging

25 kg (55 lb)

Shelf Life

12 months minimum from date of production

Storage Conditions

Store in original unopened packaging in cool and dry conditions, at temperatures between +5 °C (41 °F) and +35 °C (95 °F). Protect from direct

CHARACTERISTICS / ADVANTAGES

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

APPROVALS / CERTIFICATES

SikaEmaco[®] S 466 follows the main requirements for non-shrink hydraulic cement grout, according to ASTM C1107 and EN 1504

sunlight, heat and moisture.

Appearance / Colour Powder / Grey

Maximum Grain Size ~5 mm (1/5 in)

TECHNICAL INFORMATION

Compressive Strength	at +25 °C (77 °F)	1 day	7 days	28 days	(BS 1881 Part 116)
	w/p = 0.14	~25 Mpa (3625 psi)	~45 MPa (6526 psi)	≥ 65 Mpa (9427 psi)	

*Testing cubes 100 x 100 x 100 mm

APPLICATION INFORMATION

Fresh Mortar Density ~2.29 kg/L (143.00 lb/ft³) at +25 °C (77 °F)

Yield ~12.4 L / 25 kg bag (0.44 ft³/55 lb bag)

Layer Thickness Min. 25 mm (1 in) per pour
Max. 150 mm (6 in) per pour
Note: Higher thicknesses in one pour can be achieved by "bulking". Contact Sika Technical Department for advice.

Ambient Air Temperature Minimum +5 °C (41 °F) / Maximum +35 °C (95 °F)

Mixing Ratio	Consistency	L of water per bag	Gallon of water per bag	Water/Powder Ratio
	Flowable	3.25 - 3.5 per 25 kg bag	0.85 - 0.92 per 55 lb bag	0.13 - 0.14

Substrate Temperature Minimum +5 °C (41 °F) / Maximum +35 °C (95 °F)

Pot Life ~45 minutes at +25 °C (77 °F)

BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

LIMITATIONS

- Ensure formwork is secure and watertight to prevent movement and leaking during placing and curing.
- When maximum thickness exceeds 150 mm, please contact your technical sales representative for product recommendation
- At high temperatures, use chilled water for mixing to keep the grout temperature below +30 °C (86 °F).
- In hot weather, base plates and foundations must be shaded from direct sunlight. Condition bags < +30 °C (86 °F) 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.

ENVIRONMENT, HEALTH & 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

NOTES ON INSTALLATION

SikaEmaco® S 466 is designed for professional use only; not for sale to or use by the general public.

- Proper application is the responsibility of the user.

- Field visits by Sika personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite

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. Delaminated, 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 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 A. Refer For specific requirements, refer to to EN1504-10.

MIXING

Add potable 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 two (2) to three (3) minutes or until the mix is free of lumps, without exceeding five (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 results.

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.

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APPLICATION

Before pouring let the mixed grout stand for approximately five (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 Sika® UltraCure, Sika® Florseal WB-18 & -25. Do not commence fogging until final set has been reached.

CLEAN UP

Clean equipment and mixer immediately after application with water. Once hardened, the material can only be removed mechanically.

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 exact product data and uses.

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 recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. 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 or may be downloaded from our website at: www.sika.ca

SikaEmacoS466-en-CA-(07-2024)-1-1.pdf

Product Data Sheet

SikaEmaco® S 466
July 2024, Version 01.01
02030200000002188

