BUILDING TRUST

PRODUCT DATA SHEET

Sika MonoTop®-2100 Micro Concrete

Flowable, Cementitious Repair Concrete

DESCRIPTION

Sika MonoTop®-2100 Micro Concrete is a high-strength, self-compacting and shrinkage-compensated material designed for free-flow application. Formulated with selected cement, graded aggregates and advanced chemical additives. It cures into a highly dense, impervious, and exceptionally durable repair concrete.

USES

Sika MonoTop®-2100 Micro Concrete is easy-to-use repair concrete designed for:
Deep Concrete Repairs: Fixes deep cracks, holes and damaged areas in driveways, patios, walkways and steps. Perfect for repairing damp or damaged concrete walls.
Water Features & Drainage: Safely repairs backyard ponds, garden water retention walls and home drainage troughs.
Structural Strengthening: Ideal for reinforcing weak concrete posts, pillars and support beams (section enlargement/jacketing).
Pipe Penetration: Filling cavities around the plumbing pipes during installation at bathroom, kitchen and balconies to make it leak proof.

CHARACTERISTICS / ADVANTAGES

Easy to Work With (Application Benefits)
- Easy to mix and apply
- No vibration needed – Flows into place perfectly on its own.
- Good flow & pumping properties – Pours and moves smoothly into deep gaps.

Heavy-Duty Performance (Strength & Durability)
- High ultimate strengths – Cures to a rock-solid, professional-grade finish.
- Impact resistant – Withstands heavy dropped objects, traffic, and wear.
- Non-shrink & Low porosity – Won't shrink or crack as it dries, creating a highly dense barrier against water.

Safe & Protected (Safety & Compatibility)
- Non-corrosive, iron, and chloride free – Won't rust or damage internal metal reinforcement bars.
- Non-toxic – Safe to handle and use around the property.

PRODUCT INFORMATION

Chemical base	Portland cement, selected fillers and aggregates, special additives
Packaging	5kgs and 20kgs
Appearance / Colour	Powder / Grey
Shelf life	6 months from date of production
Storage conditions	The product must be stored properly in undamaged and unopened, original sealed packaging, in dry conditions at temperatures between +5 °C and +35 °C. Protect from moisture, direct sunlight and frost.
Maximum grain size	D_{max} : 2.36 mm

TECHNICAL INFORMATION

Compressive strength (ASTM C109)

Curing time	Value
1 day	~15 N/mm2
3 days	~25 N/mm2
7 days	~35 N/mm2
28 days	~50 N/mm2

Values measured at water : powder = 0.15, cube size 70.6 mm, curing temperature +30 °C

Flexural strength (EN 196-1)

Curing time	Value
7 days	~5 N/mm2
28 days	~7 N/mm2

Values measured at water : powder = 0.15, curing temperature +30 °C

Shrinkage	Nil	
Expansion	1 to 4 % (Unrestrained expansion)	(ASTM C827)
Tensile adhesion strength	≥ 2 N/mm2 (28 days, +30 °C)	(EN 1542)

APPLICATION INFORMATION

Mixing ratio	Water : Powder = 0.14 to 0.16 (by weight) 2.8 L to 3.2 L water per 20 kg bag, dependent on the desired flow 0.7 L to 0.8 L water per 5 kg bag, dependent on the desired flow	
Yield	One 20 kg bag yields ~10.45 L of fresh mortar at water : powder = 0.15 One 5 kg bag yields ~2.61 L of fresh mortar at water : powder = 0.15	
Ambient air temperature	+5 °C min. / +40 °C max.	
Substrate temperature	+5 °C min. / +40 °C max.	
Pot life	~20 minutes (water : powder = 0.15, +30 °C)	
Curing time	7 days minimum (by spraying water), Full cure 28 days	
Fresh mortar density	(2.2 ± 0.1) kg/L (water : powder = 0.15)	(EN ISO 2811-1)

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.

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

EQUIPMENT

Sika MonoTop®-2100 Micro Concrete can be mixed using either a slow-speed grouting mixer (maximum 500 rpm) equipped with a paddle, or a standard drum-type concrete mixer.

SUBSTRATE QUALITY / PRE-TREATMENT

- The substrate should be prepared by suitable mechanical preparation techniques such as high pressure water jet, breakers, grit blasting, scabblers, etc.
- Concrete surfaces must be sound, clean, free from frost, oils, grease, all loosely adhering particles and other surface contaminants. All absorbent surfaces must be well saturated with clean water but be free of any surface water or puddles immediately prior to the application of produced micro-concrete.
- Clean all iron and steel surfaces thoroughly before use. Remove all rust, scale, oil, and grease using Sika® Rustoff-100 to ensure a clean metal surface.

Bonding agent and steel protection

- Embedded steel reinforcing should be free from scale, rust, oil and grease, and treated with a suitable anticorrosion coating such as Sika® Rustop / Sika MonoTop® -1010 IN.
- The application of a suitable bonding agent, such as Sika® Hibond will improve adhesion on large areas or where particularly dense concrete substrates are involved.

MIXING

1. Place about 80–90 % of the premeasured clean water into a clean mixer and gradually add the whole bag of Sika MonoTop®-2100 Micro Concrete into it while continuously mixing.
2. Add the remaining water and additional clean 5–10 mm aggregates (if needed as per design) until the desired consistency is obtained.
3. Mixing time should be minimum 3 minutes.

IMPORTANT
Concrete can also be produced with addition of 10 mm down properly graded silt-free aggregate in proportion of 2 : 1 (Sika MonoTop®-2100 Micro Concrete: coarse aggregate) by weight.
IMPORTANT
Do not mix more material, which cannot be used within pot life.
IMPORTANT
Do not add extra water.
IMPORTANT
Mix only full bags for best results.

APPLICATION

Strictly follow installation procedures as defined in method statements, application manuals and working instructions which must always be adjusted to the actual site conditions.
IMPORTANT
Formwork Ensure formwork is secure and watertight to prevent movement and leaking during placing and curing.
IMPORTANT

Working in thick sections
Do not pour more than 100 mm of layer thickness without addition of aggregates.

Small localised repairs
Small volume mixing may carried out with a suitable low-speed (500 rpm) drill and mixing paddle. After mixing, stir lightly with a spatula for a few seconds to release any entrapped air. The microconcrete is then poured immediately into the prepared formwork.

Large repairs
When carrying out large scale repairs or column / beam jacketing, ensure sufficient pressure head is maintained for uninterrupted concrete flow. Formwork must be firmly placed and kept watertight. When placing micro-concrete over large area, it is important to maintain a continuous flow throughout the process. Work sequence and equipment must be properly organised to ensure an uninterrupted flow of microconcrete. Ensure proper air displacement when pouring. In large areas, microconcrete may be mixed and pumped using heavy duty screw feed and piston pumps. Equipment suitability should be tested and checked prior to actual grouting works.

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Cold weather working
Consider storing bags in a warm environment and using warm water to assist with achieving strength gain and maintaining physical properties.

Hot weather working
Consider storing bags in a cool environment and using cold water to assist with controlling the exothermic reaction to reduce cracking and maintaining physical properties.

CURING TREATMENT

Formwork must remain in place for at least 3 days. Upon removal of the formwork, cure the exposed surfaces immediately with Sika Antisol® curing compound or use other approved curing methods.

CLEANING OF TOOLS

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

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.