BUILDING TRUST

PRODUCT DATA SHEET

Sika MonoTop®-3260 Grid

Cementitious Fibre Reinforced Mortar for the Sika® Carbodur® Grid 'M' (Masonry) System

PRODUCT DESCRIPTION

Sika MonoTop®-3260 Grid is a one-part, cementitious fibre reinforced surface / finishing mortar. It is designed to be used in combination with the Sika® CarboDur®-300 Grid as part of the Sika® CarboDur® Grid System, which provides an efficient solution to consolidate and strengthen masonry.

USES

Sika MonoTop®-3260 Grid may only be used by experienced and trained professionals.
A Component of the Sika® CarboDur® Grid System designed to:

- Reinforce masonry in civil engineering structures (e.g. aqueducts, sewage works, water tanks, etc.) or residential buildings.
- Retain masonry structures in the case of cyclic load and postpone the risk of collapse in case of earthquakes.
- Distribute stresses generated by movement of the structure to avoid cracks and detachment of the mortar.
- Improve the connection between masonry panels and reinforced concrete frames.
- Patch repair, repair bed joints on brick, stone masonry, block masonry and masonry curtain walls.

CHARACTERISTICS / ADVANTAGES

- Good adhesion to brick, stone and cohesive porous substrates (excluding plaster, gypsum, etc.).
- Sulphate and sea water resistant.
- Applied up to 40 mm thick in one layer on vertical and horizontal applications.
- Non-sag overhead at maximum thickness.
- Good workability.
- Hand and machine application (wet spray technique).
- Ready to mix with water.

APPROVALS / STANDARDS

- CE Marking and Declaration of Performance to EN 1504-3 - Concrete repair product for structural repair.
- CE marking and Declaration of Performance to EN 1504-2 - Surface protection systems for concrete.
- CE marking and Declaration of Performance to EN 998-1 - Specification for mortar for masonry.

PRODUCT INFORMATION

Chemical Base	Sulphate resistant cement, selected aggregates, synthetic fibres and special additives.
Packaging	25 kg bags.
Shelf Life	12 months from date of production.
Storage Conditions	Product must be stored in original, unopened and undamaged packaging in dry conditions at temperatures between +5 °C and +35 °C. Always refer to packaging.
Appearance / Colour	Grey powder.

Maximum Grain Size	D_{max}: 2 mm	
Soluble Chloride Ion Content	≤ 0,05 %	(EN 1015-17)

TECHNICAL INFORMATION

Compressive Strength	1 day	~ 20 MPa	(EN 12190)
	28 days	~ 70 MPa	
Modulus of Elasticity in Compression	> 40 GPa		(EN 13412)
Flexural Strength	1 day	~3.3 MPa	(EN 12190)
	28 days	~7,5 MPa	
Tensile adhesion strength	≥ 2 MPa		(EN 1542)
Shrinkage	Shrinkage ~600 µm/m (+20 °C / 65 % relative humidity at 28 days)		(EN 12617-4)
Restrained Shrinkage / Expansion	≥ 2.0 MPa		(EN 12617-4)
Thermal Compatibility	≥ 2.0 MPa (Part 1- Freeze-Thaw)		(EN 13687-1)
Capillary Absorption	w = 0,1 kg/(m²h$^{0.5}$) w < 0,05 kg/(m²h$^{0.5}$)		(EN 13057) (EN 1062-3)
Water Penetration under Pressure	No ingress through the System with 50 mm layer thickness		
Water Penetration under Negative Pressure	No ingress through the System with 50 mm layer thickness		
Diffusion Resistance to Water Vapour	µH_2O ≈ 220		(EN ISO 7783)
Lap Shear Strength	µCO_2 ≈ 21000		(EN 1062-6)
Carbonation Resistance	d_k ≤ control concrete (MC(0.45))		(EN 13295)

SYSTEM INFORMATION

System Structure	Sika MonoTop®-3260 Grid	Levelling and embedding layer
	Sika® CarboDur®-300 Grid	Reinforcing grid
	Sika MonoTop®-3260 Grid	Finishing layer

APPLICATION INFORMATION

Mixing Ratio	~2,6 L to 2,8 L of water for 25 kg of powder	
Fresh mortar density	~2,2 kg/l	
Consumption	~2,0 kg/m²/mm of Powder Consumption depends on the roughness and absorbency of the substrate. This figure is theoretical and does not allow for any additional material due to surface porosity, surface profile, variations in level or wastage, etc.	
Yield	25 kg of powder yields ~13 litres of mortar	
Layer Thickness	Horizontal	minimum 10 mm / maximum 40 mm per application
	Vertical	minimum 10 mm / maximum 40 mm per application
	Overhead	minimum 10 mm / maximum 25 mm per application
	Do not exceed a maximum layer thickness of 60 mm in two application steps in the system with the embedded Sika® CarboDur®-300 Grid.	

Ambient Air Temperature	+5 °C minimum / +35 °C maximum
Substrate Temperature	+5 °C minimum / +35 °C maximum
Pot Life	~40 minutes at +20 °C

VALUE BASE

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.

FURTHER DOCUMENTS

Sika® Method Statement: Sika® CarboDur® Grid M Masonry Strengthening. Ref. No. 850 41 15.

LIMITATIONS

- Do not apply on gypsum substrates.
- Avoid application in direct sun and / or strong winds.
- Do not add water over recommended dosage.
- Apply only to stable, prepared substrates.
- Do not add additional water during the surface finishing as this can cause discolouration and cracking.
- Protect freshly applied material from freezing.

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

Substrate preparation equipment
- Mechanical handheld tools.
- High / ultra-high-pressure water blasting equipment.

Mixing equipment
Suitable mixing container.
- Small quantities - low speed (< 500 rpm) electric hand drill mixer.
- Large quantities or machine application - suitable forced action mixer.

Application equipment
- Hand applied – Plasterers hawk and trowel.
- Wet Spray - All-in-one mixing and spraying machine or separate spraying machine and all associated ancillary equipment to suit application volumes.

Finishing equipment
- Trowel (stainless steel, steel, wooden or PVC).
- Sponge.

SUBSTRATE QUALITY / PRE-TREATMENT

Masonry
The substrate must be thoroughly clean, free from dust, loose material, surface contamination and materials which reduce adhesion or prevent suction or wetting by repair materials.
Remove delaminated, weak, damaged and deteriorated masonry. Remove using mechanical handheld tools or high / ultra-high-pressure water blasting equipment.

MIXING

Hand applied or wet spray application
1. Pour the minimum recommended clean water quantity into a mixing container / equipment.
2. While stirring slowly, add the powder to the water.
3. Mix thoroughly for at least for 3 minutes adding additional water if necessary, to the maximum specified amount.
4. Adjust to the required consistency to achieve a smooth consistent mix.
5. Check the consistency after every mix.

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.

Mortar
The final pre-wetted surface must achieve a dark matt appearance (saturated surface dry).
To prevent sagging or slumping of ‘built up’ mortar layers. Allow each layer to slightly harden before applying subsequent layers 'wet on wet'.

Manual application
1. Thoroughly pre-wet the prepared substrate (2 hours recommended) before application.
2. Keep the surface wet and do not allow to dry.
3. Remove excess water from within the surface pores and cavities (e.g. with a clean sponge).
4. Make a scratch coat using the mortar.
5. Apply the scratch coat over the complete substrate surface to form a thin layer to fill surface pores or cavities.
6. Apply the repair mortar onto the scratch coat ‘wet on wet’ at the minimum and maximum layer thicknesses without the formation of voids.

Sprayed application - wet spray
1. Thoroughly pre-wet the prepared substrate (2 hours recommended) before application.
2. Keep the surface wet and do not allow to dry.
3. Remove excess water from within the surface pores and cavities (e.g. with a clean sponge).
4. Place the wet mixed Sika MonoTop®-3260 Grid into the spraying equipment.
5. Spray the mortar onto the pre-wetted substrate between the minimum and maximum layer thicknesses without the formation of voids.

Grid embedment
1. Apply the first layer of Sika® MonoTop®-3260 Grid mortar to the prepared substrate.
2. Embed Sika MonoTop®-3260 Grid into the 1st wet and levelled layer of mortar.

3. While the first layer is still wet, apply a 2nd layer of mortar to completely cover the Sika MonoTop®-3260 Grid.

Surface finishing

1. Finish the surface of the 2nd layer of mortar to a smooth finish using a stainless steel, steel, PVC or wooden trowel as soon as the mortar has started to harden.

CURING TREATMENT

Protect fresh mortar once is finished immediately from premature drying using an appropriate curing method (e.g. curing compound, moist geotextile membrane, polyethylene sheet, etc.).
Curing compounds must not be used when they could adversely affect subsequently applied products and systems.

CLEANING OF TOOLS

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

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.

SIKA LIMITED
Watchmead
Welwyn Garden City
Hertfordshire, AL7 1BQ
Tel: 01707 394444
Web: www.sika.co.uk
Twitter: @SikaLimited