

PRODUCT DATA SHEET

Sika MonoTop®-723 Finiro

1-COMPONENT, CEMENTITIOUS MORTAR FOR CONCRETE PROTECTION,
PORE SEALING, RENDERING AND THIN-LAYER CONCRETE REPAIR WORKS



DESCRIPTION

Sika MonoTop®-723 Finiro is a 1-component, ready to use, fibre reinforced, polymer modified, cementitious mortar for concrete protection, rendering and finishing, levelling and pore sealing of the substrate as for thin layer repair works, applied by hand or wet spray technique, meeting the requirements of EN 1504-2 as protective layer and of EN 1504-3 as class R3.

USES

Sika MonoTop®-723 Finiro is a high performance, low modulus polymer modified cementitious mortar for layer thickness of between 1 and 5mm, suitable for:

- Concrete protection (as cementitious coating), rendering, pore filling and overcoating of repair works
- Levelling mortar prior to protection coating system such as Sikagard®, Sikalastic®, e.t.c.)
- Repair of thin layer minor defects (concrete cover, pores, honeycombs, e.t.c.)
- Overcoating of Sika® Carbodur® or SikaWrap® strengthening works after broadcasting
- Application both manually (trowel) and by spraying

CHARACTERISTICS / ADVANTAGES

- Protective coating according to EN 1504-2
- Class R3 according to EN 1504-3
- For application thickness of between 1 mm and 5 mm per layer
- Remarkable shrinkage compensation
- Exceptional workability and smooth finishing
- Application by hand or by wet spray projection
- Excellent adhesion on various substrates, including cementitious, concrete and masonry
- High breathability. Very good water vapour diffusion
- Low modulus, non rigid mortar
- Compatible with Sika® overcoating systems (Sikagard®, Sikalastic®, e.t.c.)

APPROVALS / CERTIFICATES

- CE Marking and Declaration of Performance to EN 1504-2 - Surface protection product for concrete - Coating
- CE Marking and Declaration of Performance to EN 1504-3 - Concrete repair product for structural repair

PRODUCT INFORMATION

Composition	Cement modified with polymers, selected aggregates and microsilica	
Packaging	25 kg bags	
Appearance / Colour	Powder, light grey	
Shelf life	12 months from date of production	
Storage conditions	Store properly in original unopened, sealed and undamaged packaging in dry conditions, at temperatures between +5°C and +35°C.	
Density	Fresh mortar density: ~ 1.8 kg/lt	(EN 1015-6)
Maximum Grain Size	D _{max} : 0,5 mm	

Soluble Chloride Ion Content ≤ 0,05 % (EN 1015-17)

Product Declaration

- CE-marking and Declaration of Performance as Repair mortar PCC for structural repair of concrete structures in buildings and civil engineering works, Class R3. Principles 3, & 7, Methods 3.1 & 3.3, 7.1 & 7.2 according to EN1504-9:2008 based on certificate of factory production control issued by notified factory production control certification body and type testing.
- CE-marking and Declaration of Performance as Surface protection product – Coating, Principle 2 (Moisture control) – Method 2.2 and Principle 8 (Increasing resistivity) – Method 8.2 according to EN 1504-9:2008 based on certificate of factory production control issued by notified factory production control certification body and type testing.

TECHNICAL INFORMATION

Compressive Strength	1 day	7 days	28 days	Requirements (R3)	(EN 12190)
	≥ 6 MPa	≥ 20 MPa	≥ 30 MPa	≥ 25 MPa	
Modulus of Elasticity in Compression	~ 12 GPa				(EN 13412)
Tensile Strength in Flexure	1 day	7 days	28 days	(EN 196-1)	
	≥ 1 MPa	≥ 3 MPa	≥ 5 MPa		
Tensile Adhesion Strength	Results		Requirements Class R3		(EN 1542)
	≥ 2.5 MPa		≥ 1.5 MPa		
Restrained Shrinkage / Expansion	Results		Requirements Class R3		(EN 12617-4)
	≥ 2.0 MPa		≥ 1.5 MPa		
Reaction to Fire	NPD				(EN 13501-1)
Permeability to Water Vapour	Class I (permeable), $S_D < 5$ m				(EN ISO 7783)
Capillary Absorption	≤ 0.5 kg/m ² ·h ^{0.5}				(EN 13057)
	w < 0.1 kg/m ² ·h ^{0.5}				(EN 1062-3)
Carbonation Resistance	dk ≤ control concrete (MC (0.45))				(EN 13295)

SYSTEMS

System Structure	Sika MonoTop®-723 Finiro is part of the range of Sika mortars complying with the relevant part of European Standard EN 1504 and comprising of:	
	Bonding primer and reinforcement corrosion protection:	
	Sika® MonoTop®-910 N	Normal use (EN 1504-7)
	SikaTop® Armatec® 110 EpoCem®	Demanding requirements (EN 1504-7)
Repair mortar:	SikaRep® / Sika MonoTop® product range series	Concrete repair mortars (EN 1504-3)
	Levelling / Thin repairs:	
Sika MonoTop®-723 Finiro	Concrete protection, levelling and thin layer repair mortar	
Protective coatings		
Sikagard® / Sikalastic® product range series	Concrete protection coating systems (EN 1504-2)	

APPLICATION INFORMATION

Mixing Ratio	4,5 - 5,3 l of water per 25 kg bag, depending on the desired workability
Consumption	~ 1.5 kg/ m ² per mm of thickness depending on the substrate's roughness and final thickness of layer applied
Layer Thickness	min. 1 mm / max. 5 mm
Ambient Air Temperature	+5°C min. / +35°C max.
Substrate Temperature	+5°C min. / +35°C max.
Pot Life	~ 60 min (at 20°C)
Waiting Time / Overcoating	As a guide, depending on weather conditions overcoat 4 days after application (3 days curing + 1 day drying) with Sikagard® or Sikalastic® range of protective coatings. Always verify that Sika MonoTop®-723 Finiro surface's moisture content is preferable < 4 % pbw (TRAMEX method) when applying vapour tight coatings. For other coatings, refer to the relevant manufacturer's data sheet/ documentation.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

Concrete / Cementitious Mortars:

The substrate must be structurally sound, thoroughly clean and free from dust, dirt and loose material, surface contamination such as oil or grease, cement laitance which reduce bond or prevent suction or wetting. The concrete tensile strength (pull-off) shall be > 1.5MPa.

Delaminated, weak, damaged and deteriorated concrete and where necessary sound concrete - but not to the detriment of the structural - shall be removed by suitable mechanical preparation techniques, such as high-pressure water cleaning or sandblasting. No vibration cleaning methods are preferable. Repairs to the substrate, filling of blowholes/voids and surface levelling must be carried out using appropriate repair products from the Sika MonoTop®, SikaRep® or Sikadur® range of materials. All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush or vacuum. The concrete's tensile strength (pull-off) shall be > 1.5 MPa. Follow the directions given by the Supervising Officer or Qualified Engineer.

Other substrates:

The substrate must be mechanically resistant, must have an open texture and must be free from dust, dirt, loose material and surface contamination, such as oil or grease.

Steel reinforcement:

Steel surface must be clean from dust products, mill scale, mortar, concrete residues, oil, grease, dust and other loose materials which may reduce bond or may contribute to corrosion. In case of rust, clean uniformly the whole circumference of the steel bars (where applicable) using abrasive blast cleaning techniques or high pressure waterblasting to Sa 2½ in accordance with ISO 8501-1. Protect cleaned bars from further contamination, prior to application of the mor-

tar.

Reference shall be made to EN1504-10 for specific requirements.

MIXING

Sika MonoTop®-723 Finiro can be mixed with a low speed (~500 r.p.m.) electrical hand drill mixer. Pour the clean water (potable) in the correct desired proportion into a suitable mixing container. While stirring slowly, add the powder gradually to the water and mix thoroughly at least for 3 minutes, adding additional water during the mixing time if necessary up to the maximum specified amount, until a homogeneous lump-free required consistency is reached. Mix full bags for best results. 25 kg of Sika MonoTop®-723 Finiro powder is mixed with 4.5 - 5.3 lt of water depending on the required consistency.

APPLICATION

Sika MonoTop®-723 Finiro can be applied either manually using traditional techniques or mechanically using wet spray equipment.

Sika MonoTop®-723 Finiro is applied using plastering/rendering techniques, with trowels, floats, scrapers etc. on a presaturated, damp substrate. Apply by straight spatula onto the damp substrate, exerting sufficient pressure.

Thoroughly pre-wet the prepared substrate, recommended 2 hours before applying Sika MonoTop®-723 Finiro.

Keep the surface wet and do not allow drying. Before application remove excess water e.g. with a clean sponge. The surface shall appear a dark matt appearance without glistening or saturated surface dry (SSD) appearance and surface pores and pits shall not contain water.

When manually applying, first make a scratch coat by firmly scrapping Sika MonoTop®-723 Finiro over the substrate surface to form a thin layer and fill any pores or pits in the surface. Ensure the whole surface covered by the scratch coat. Apply a second uniform

levelling layer. The second layer can be applied fresh-on-fresh on the scratch coat or even on the cured first layer. In any case the maximum layer thickness per layer is 5 mm.

For the covering of large surfaces the application can be executed also by wet spraying machines (e.g. M-Tec Monomix FU, Turbosol, Putzmeister or hopper gun technique). Sika MonoTop®-723 Finiro can be wet spray applied without changing the mixing ratio, but care must be taken to prevent the material from overheating in the hopper or lines. Do not exceed the maximum layer thickness. Smooth and finish as usual.

Reinforcement Corrosion Protection

Where a reinforcement coating is required (e.g. Sika MonoTop®-910 or SikaTop® Armatec®-110 Epocem®) refer to System Information and to the relevant Product Data Sheet for more detailed information. In general, apply corrosion protection mortar in two layers by using a two brush or hopper gun technique on the reinforcement (one layer of approx. 1mm thickness). Apply the first layer on the exposed reinforcement. Wait until the first layer is hard to finger nail so it cannot be wiped off when applying the second layer. Apply a second layer on the coated reinforcement and on the surrounding concrete substrate that is going to be repaired. Apply Sika MonoTop®-723 Finiro when the second layer of reinforcement corrosion protection layer is still wet (wet on wet).

Build Up layer

The application thickness must be between 1 and 5 mm. Application in several layers is possible with careful NO dampening of each preceding substrate layer. The first layer shall be started to set / hardened and exothermic reaction of the material shall be completed before applying the second layer. Never apply layer thicknesses above 5 mm in once.

Finishing

The surface can be finished according to the requirements using a float or a relevant wooden or plastic float or damp sponge while wet creating a smooth final surface or with a relevant rough-cast tool as soon as the mortar has started to stiffen. Do not overwork the finished surface. No additional water must be added during this finishing process, if tools are cleaned with water during application, then this must be squeezed out or wiped off before re-using them on the surface. Only finish the final layer to a smooth, dense surface. In case of overcoating (eg. with Sikagard® coatings) the appropriate waiting time has to be followed.

CURING TREATMENT

Protect the freshly applied mortar from early dehydration and/or premature drying by using the relevant curing methods (at least for 24 hours), e.g. curing compound such as Sika® Antisol® or Sikafloor® Proseal or moist geotextile membrane, polythene sheet, e.t.c. once any surface water has evaporated.

CLEANING OF EQUIPMENT

Removal of fresh remnants from tools and application equipment can be carried out using water immediately after use. Hardened / cured material can only be mechanically removed.

FURTHER INFORMATION

Refer to the Sika Method Statement for "Repair Concrete Using Sika® Ready to use Mortars" (Ref. 8503201) for more information regarding repair system application, substrate preparation and/or refer to the recommendations provided in EN 1504-10.

IMPORTANT CONSIDERATIONS

- Do not add water over the recommended dosage
- Do not add cement or other substances that could affect the properties of the mortar
- Do not add water or fresh mortar to a mortar mix which has already started setting
- Avoid application in direct sun and/or to strong wind
- Apply only to sound, prepared substrate
- Protect freshly applied material from direct sunlight, freezing, from rain and wind
- Do not add additional water during the surface finishing as this will cause discolouration and cracking
- Record ambient and substrate temperatures before and during application
- Use only clean water
- Always ensure good ventilation when using Sika MonoTop®-723 Finiro in a confined space, to remove excess moisture
- Colour variations can occur on unsealed Sika MonoTop®-723 Finiro through exposure to direct sun light. This however, will not influence the mechanical properties
- The incorrect assessment and treatment of cracks (static or dynamic cracks) prior the application of Sika MonoTop®-723 Finiro can lead to a reduced service life and reflective cracking
- Sika MonoTop®-723 Finiro can be reinforced for crack bridging enhancement using Sika® FiberNet (80gr/m²)

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.

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.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

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.

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Product Data Sheet

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