

PRODUCT DATA SHEET

Sika ThermoCoat®-1/3 HS

Cementitious mortar for External Thermal Insulation Composite Systems (ETICS)



DESCRIPTION

Sika ThermoCoat®-1/3 HS is a 1-component, cementitious, fiber reinforced mortar, suitable for bonding and rendering of thermal insulation boards with grid embedding, according to EAD 040083-00-0404.

USES

- Designed for use as bonding and rendering mortar of the certified external thermal insulation composite system Sika ThermoCoat®, according to EAD 040083-00-0404
- Suitable also as crack bridging system with embedding of Sika ThermoCoat®-4 HS glass fiber mesh
- Classified as a general purpose mortar (type GP CS-IV W2, according to EN 998-1) for renderings in internal and external applications

CHARACTERISTICS / ADVANTAGES

- Easy to apply and to embed the reinforcing mesh
- Exceptional adhesion on various substrates, such as bricks, concrete, coating, plaster, e.t.c.
- Non-combustible material
- Excellent reaction to fire classification: A1 acc. to EN 13501-1
- General purpose mortar according to EN 998-1 (GP)
- Very good adhesion on thermal insulation boards (MW, EPS, XPS, etc.).
- Exceptional workability and thixotropy
- Base coat with excellent finishing
- Available in grey and white

APPROVALS / CERTIFICATES

- CE Marking and Declaration of Performance to EN 998-1 - General purpose rendering / plastering mortar for external and internal use (GP)
- CE Marking and Declaration of Performance according to EAD 040083-00-0404 - External Thermal Insulation Composite Systems (ETICS) with renderings

PRODUCT INFORMATION

Product declaration

- CE-marking and Declaration of Performance as General purpose rendering / plastering mortar for external and internal use (GP) according to EN 998-1:2016, based on type testing and factory production control.
- CE Marking and Declaration of Performance according to EAD 040083-00-0404 - External Thermal Insulation Composite System (ETICS) with rendering, based on certificate of factory production control issued by notified factory production control certification body and type testing, as part of Sika ThermoCoat® system.

Composition

Cement, selected aggregates, special additives and fibers

Packaging

25 kg bags

Shelf life

12 months from date of production

Storage conditions	The product must be stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5°C and +35°C. Protect from direct sunlight.	
Appearance and colour	Powder, grey and white	
Maximum grain size	0.7 mm	
Density	~ 1.38 kg/lit (powder density)	(EN 1015-10)

TECHNICAL INFORMATION

Compressive strength	7 days	28 days	(EN 1015-11)
	≥ 8 N/mm ²	≥ 15 N/mm ² (Class CS IV acc. to EN 998-1)	
Tensile strength in flexure	7 days	28 days	(EN 1015-11)
	≥ 3 N/mm ²	≥ 5 N/mm ²	
Tensile adhesion strength	Concrete	≥ 1.2 N/mm ² (FP: B)	(EN 1015-12)
	Polystyrene (EPS)	≥ 0.15 N/mm ² (FP: C)	
	Polystyrene (XPS)	≥ 0.2 N/mm ² (FP: A)	
	Mineral Wool (MW)	≥ 12 KPa (FP: C)	
Thermal conductivity	0.49 W/mK ($\lambda_{10,dry}$)	(EN 1015-10 / EN 1745 (Table A12))	
Water penetration after capillary absorption	C ≤ 0.2 kg/m ² x min ^{0.5} (category Wc 2)		(EN 1015-18)
Permeability to water vapour	$\mu \leq 20$		(EN 1015-19)
Reaction to fire	Class A1		(EN 13501-1)

SYSTEM INFORMATION

System structure	Sika ThermoCoat®-1/3 HS forms part of ETICS system Sika ThermoCoat® which comprises of the following products:		
	Sika ThermoCoat®-1/3 HS	Cementitious mortar (acc. to EN 998-1) for bonding and rendering thermal insulation boards	
	Sika ThermoCoat®-2 HS	Expanded polystyrene boards (EPS) with flame retardant, suitable for ETICS (acc. to EN 13163)	
	Sika ThermoCoat®-2 HS MW	Non-combustible rock based mineral fiber insulation boards (MW), suitable for ETICS (acc. to EN 13162)	
	Sika ThermoCoat®-4 HS	Alkali resistant glass fiber mesh for strengthening the rendering of thermal insulation boards	
	Sika ThermoCoat®-5 HS Primer	Water dispersed primer for paste-like renders	
	Sika ThermoCoat®-5 HS / -5 HS Fire & Sika ThermoCoat®-5 HS Silic / -5 HS Silic Fire	Acrylic & silicone based, paste-like finishing coating (acc. to EN 15824)	
	Sika ThermoCoat®-8 HS/ -8 HS CL	Plastic expandable fixation anchor with plastic / steel nail (acc. to EAD 330196-00-0604)	
	Sika ThermoCoat®-8 HS FR	Fire resistant fixation anchor made of hot-dip galvanized or stainless steel	

APPLICATION INFORMATION

Mixing ratio	As a bonding mortar: 5.4-5.9 lt of water per 25 kg bag As a rendering mortar: 5.8-6.3 lt or water per 25 kg bag
Consumption	As a bonding mortar: 3 - 5 kg/m ² As a rendering mortar: 1.0 - 1.3 kg/m ² per mm of thickness
Ambient air temperature	+ 5°C min. / + 35°C max.
Substrate temperature	+ 5°C min. / + 35°C max.
Pot Life	~ 3-4 hours at +23°C
Waiting time to overcoating	When used as a bonding mortar: Minimum waiting time before overcoating: 2-3 days (depending on the prevailing environmental conditions) When used as a rendering mortar: Wait at least 3 days before the application of the final render of Sika® ThermoCoat series

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.

IMPORTANT CONSIDERATIONS

Sika ThermoCoat®-1/3 HS cannot be used for bonding of thermal insulation boards:

- on metal and highly flexible substrates
- on substrates with high unevenness
- on weak substrates (in this case fix the panel mechanically)

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.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

The substrate must be sound, dry, free from loose and friable materials, low adhesion coatings and any other substances that might impair the adhesion of Sika ThermoCoat®-1/3 HS.

Concrete

The substrate must be mature (at least 28 days old) and must be prepared by suitable mechanical methods, such as high pressure waterblasting or sandblasting. Repairs to the substrate and filling of blowholes/voids must be carried out using appropriate products from the SikaRep® / Sika MonoTop® range of materials. Prior to the application, wet the substrate up to saturation. Remove any standing water prior the application of Sika ThermoCoat®-1/3 HS.

Masonry

The substrate must be prepared mechanically in order to remove friable parts or remnants of old renderings. Afterwards, the substrate must be cleaned by brushing or by high pressure water blasting (200-400 bar) and all repairs, blowholes, voids must be repaired using suitable masonry mortars (e.g. SikaRep®-200 Multi or Sika MonoTop®- 722 Mur). Prewet the substrate up to saturation.

Renderings / Coatings

The substrate must be sound, free from dust, dirt, friable parts, grease, efflorescence, e.t.c. Old existing layers must be checked in order to verify their adhesion to the substrate and must be completely removed if they are considered as unsuitable substrate. Additional mechanical fixing of the insulation board must be considered if needed.

In all cases, rising moisture phenomena must be treated and damp areas must dry out before the application of the mortar.

Sika ThermoCoat®-1/3 HS is applied directly on concrete, masonry, renders (organic or cementitious) or coated substrates. Under normal conditions, no primer is needed. In case of extremely absorbent or demanding substrates, please contact our Technical Department.

MIXING

Pour the water in the correct desired proportion into a suitable mixing container. While stirring slowly, add the powder 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. Leave the mix to stand for 3-5 minutes and stir briefly before use.

APPLICATION

As a bonding mortar

Apply the product on the whole backside of the thermal insulation board using a No 8 or 10 notched trowel. Otherwise, you can apply on the perimeter of the panel and on spot at the center using a trowel. Afterwards apply them on the substrate, exerting pressure and making sure they are alligned.

As a rendering mortar

Apply using a notched trowel. Apply the embedding grid (eg. Sika ThermoCoat®-4 HS) while Sika ThermoCoat®-1/3 HS it still fresh and smooth using a straight spatula, embedding the mesh fully and creating a smooth final surface. In order to avoid cracks between the rolls of the mesh, ensure an overlapping of $\geq 10\text{cm}$. Apply the product in one or two layers of mortar.

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.

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.

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Product Data Sheet

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