

PRODUCT DATA SHEET

SikaWall®-1050 Elite

Fiber reinforced mortar for External Thermal Insulation Composite Systems (ETICS)

DESCRIPTION

SikaWall®-1050 Elite 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 certified External Thermal Insulation Composite Systems **Sikatherm® Essential Elite, Sikatherm® Air & Sikatherm® Fire**, according to EAD 040083-00-0404
- Bonding and rendering of thermal insulation boards, on vertical walls or ceilings
- Suitable for use as a rendering mortar with mesh embedding (SikaWall®-9160 Mesh GR)
- Classified as a general purpose mortar (type GP CS-IV W2, according to EN 998-1), for rendering in internal and external application
- Suitable for renovation works

FEATURES

- Easy to apply and embed the reinforcing mesh
- Excellent workability and thixotropy
- Reliable and secure adhesion on usual construction substrates, such as bricks, concrete, plaster, e.t.c.
- Non-combustible material

PRODUCT INFORMATION

Composition	Cement, selected aggregates, special additives and fibers
Packaging	25 kg bags
Appearance and colour	Powder grey and white
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.

- 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 (EPS, XPS, MW)
- Excellent finishing as base coat render
- Available in grey and white colour
- Good filling properties
- Water vapour permeable

SUSTAINABILITY

- LEED: Contributes towards satisfying Environmental Quality (EQ) Credit: Low-Emitting Materials under LEEDv4 and v4.1
- VOC Emission Classification GEV Emission EC1^{PLUS}
- Specific Environmental Product Declaration (EPD) by the International EPD® System in accordance with ISO 14025 and EN 15804. EPD independently verified by EUROCERT
- VOC content test: Meets SCAQMD Rule 1168

CERTIFICATES AND TEST REPORTS

- 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 rendering

Density ~1.38 kg/lit (powder density) (EN 1015-10)

Maximum grain size 0.7 mm

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	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)	

Reaction to fire Class A1 (EN 13501-1)

Permeability to water vapour $\mu \leq 20$ (EN 1015-19)

Thermal conductivity 0.49 W/mK ($\lambda_{10,dry}$) (EN 1015-10 / EN 1745 (Table A12))

Water penetration after capillary absorption $C \leq 0.2 \text{ kg/m}^2 \times \text{min}^{0.5}$ (category Wc 2) (EN 1015-18)

APPLICATION INFORMATION

Mixing ratio As a bonding mortar: 5.4 – 5.9 lit of water per 25 kg bag
As a rendering mortar: 5.8 – 6.3 lit of water per 25 kg bag

Consumption As a bonding mortar: 3 – 5 kg/m²
As a rendering mortar: 1.0 – 1.3 kg/m² per mm of thickness

Ambient air temperature Min. +5 °C / Max. +35 °C

Substrate temperature Min. +5 °C / Max. +35 °C

Pot Life ~3 – 4 hours at +23 °C

Waiting time to overcoating **When used as a rendering mortar:** Wait at least 3 days before the application of the final render of SikaWall® series

SYSTEM INFORMATION

System structure

SikaWall®-1050 Elite forms part of Sikatherm® ETIC Systems, which consists of the following products:

SikaWall®-1050 Elite	Cementitious mortar (acc. to EN 998-1) for bonding and rendering thermal insulation boards
Sikatherm® EPS	Expanded polystyrene boards (EPS) with flame retardant, suitable for ETICS (acc. to EN 13163)
Sikatherm® MW	Non-combustible rock based mineral fiber insulation boards (MW), suitable for ETICS (acc. to EN 13162)
SikaWall®-9160 Mesh GR	Alkali resistant glass fiber mesh for strengthening the rendering of thermal insulation boards
SikaWall®-63 ETICS Primer	Water dispersed primer for paste-like renders
SikaWall®-6400 Elite Acrylic / Fire Acrylic & SikaWall®-6500 Elite Silic / Fire Silic	Acrylic & silicone based, paste-like finishing coatings (acc. to EN 15824)
Sikatherm® Anchors	Plastic expandable fixation anchor with plastic / steel nail, for external thermal insulation composite systems (acc. to EAD 330196-00-0604) Anchor made of hot-dip galvanized or stainless steel, for high fire resistance demands and specifications

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

- Ensure that only cold mixing water is used (drinking water quality)
- Do not add water over the recommended dosage
- Apply only to sound and suitable prepared substrate
- Throughout the entire application, drying and hardening phase, the ambient, substrate and material temperature must be at least 5 °C
- Unfavorable weather conditions, such as temperatures of above 35 °C, wind and direct exposure to the sun, can also affect the application properties
- Raining conditions should not be allowed to have a negative influence on drying and hardening phase
- Suitable scaffolding nets should be provided in order to protect the facade against external weather influences
- Always check material's pot life and adjust for climate conditions

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 SikaWall®-1050 Elite.

Concrete

The substrate must be mature (at least 28 days old). Dirty and greasy substrate must be prepared by suitable mechanical methods, such as high pressure hydroblast (max. 200 bar) with suitable cleaning agents. Repairs of the substrate and filling of blowholes/voids, must be carried out in a separate working step, using appropriate mortars (e.g. SikaRep® / Sika MonoTop® range). Prior to the application, wet the substrate up to saturation. Remove any standing water, in order to achieve an SSD surface until the application of SikaWall®-1050 Elite.

Masonry

The substrate must be prepared mechanically in order to remove friable parts or remnants of old mortars.

Dusty substrate should be cleaned by brushing or by high pressure hydroblast (max 200 bar) and with suitable cleaning agents in case of greasy substances. Rinse off with clear water and allow to dry. Repair and smooth over any irregularities and cavities in a separate working step, using suitable masonry mortars, (e.g. SikaRep® range). Pre-wet the substrate up to saturation.

Renderings / Coatings

The substrate must be sound, free from dust, dirt, friable parts, grease, efflorescence, e.t.c. Dirty, greasy substrate must be prepared by hydroblast (max 200 bar). Rinse off with clear water and allow to dry. 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. In all cases, rising moisture phenomena must be treated and damp areas must dry out prior to the application. SikaWall®-1050 Elite is applied directly on concrete, masonry, renders (organic or mineral) or coated substrates.

Under normal conditions, no primer is needed. Normal absorbent surfaces are recommended to be dampened beforehand with water.

In case of extremely absorbent or demanding substrates, apply a primer depending on the type of the substrate (e.g. Sikafloor® Primer range). For additional support, please contact Sika Technical Department. Moisture protection is a critical consideration, as the presence of moisture may cause swelling of the substrate, particularly in drywall boards. In all cases, rising moisture phenomena must be treated and damp areas must dry out prior to the application. After allowing the base coat sufficient time to harden and following application of the system primer, SikaWall®-1050 Elite can be applied.

Important: If SikaWall®-1050 Elite is applied too soon, there is a risk that patches will be created

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 SikaWall®-1050 Elite on suitably inspected and prepared substrate, either using bead/spot method, or over the entire surface of the insulation board.

BEAD / SPOT APPLICATION METHOD

Apply a border of mortar around the circumference (bead) and 3 spots of adhesive in the middle of the insulation board.

FULL SURFACE APPLICATION

Apply on the whole backside of the insulation panel, using a notching trowel (notching dependent on the evenness of the substrate).

As a rendering mortar

The insulation panels must be carefully laid (installed), so that a complete even surface is achieved. Uneven joints between insulation boards must be sanded down and the resulting sanding dust must be thoroughly removed, prior to the application of the rendering mortar.

Note: In case of stone wool insulation boards (MW), uneven joints must be levelled by applying a smoothing layer of SikaWall®-1050 Elite (wait smoothing layer to dry before the application of the reinforced base coat).

Apply SikaWall®-1050 Elite in even thickness, using a notched trowel. While SikaWall®-1050 Elite is still fresh, apply the embedding grid (SikaWall®- 9160 Mesh range), from top to bottom -either vertically or horizontally- with an overlap of at least 10 cm, without creases. In order the full embedding to be ensured, apply a second layer of SikaWall®-1050 Elite, wet-on-wet. The mesh must be covered with at least 1 mm of SikaWall®-1050 Elite and at least 0.5 mm in the area of overlapping.

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.

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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