

PRODUCT DATA SHEET

Sikatherm[®]-611 Render

LIGHTWEIGHT INSULATION PLASTER

DESCRIPTION

Sikatherm[®]-611 Render is an insulating system designed for external facades of houses, buildings, or other structures as well as internal partitions or ceilings. It is applied in the same way as a wall plaster onto exterior and interior surfaces manually with hand trowelling tools and/or machine.

USES

- Suitable for both internal and external wall application.
- Compatible with commonly used tile adhesives and waterproof membranes.

CHARACTERISTICS / ADVANTAGES

- Excellent thermal insulation
- Good acoustic insulation
- Fire-resistant
- Water repellent to avoid loss of insulation properties after rain
- Certified Green Label by Singapore Green Building Council

PRODUCT INFORMATION

Chemical Base	Cementitious mixture and EPS beads	
Packaging	15 Kg	
Shelf Life	12 months from manufacture date	
Storage Conditions	Store properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Protect from direct sunlight.	
Density	Crushed EPS Beads 170 - 200 kg/m ³	Virgin EPS Beads 260 - 280 kg/m ³

TECHNICAL INFORMATION

Compressive Strength	0.7 N/mm ²	(BS EN 1015-11: 2019)
Tensile Adhesion Strength	0.2 N/mm ²	(BS EN 1015-12:2016)
Resistance to fire	Non-combustible, Class A2-s1, d0	(BS EN 13501-1: 2018)

Permeability to Water Vapour	Water Vapour Diffusion 3,606	(BS EN 1015-19: 2019)
Water Vapour Transimission	4,333 g/m ² day	(BS EN 1015-19: 2019)
Capillary Absorption	0.2 kg/m ² min. ^{0.5}	(BS EN 1015-18:2002)
Thermal Conductivity	≤ 0.060 W/(m.K)	(ASTM C518: 2021)
Sound Insulation	Noise Reduction Cefficient, NRC 0.20	Sound Absorption Average, SAA (200Hz - 2500Hz) 0.21 (ASTM C433-22)

APPLICATION INFORMATION

Mixing Ratio	Material	Weight	
	Sikatherm®-611 Render	15 kg	
EPS Beads	Crushed (0 - 4 mm)	Virgin (2 - 3 mm)	
		100 ltr	100 ltr
Water	Crushed (0 - 4 mm)	Virgin (2 - 3 mm)	
		15 - 17 ltr	12 - 16 ltr

Ambient Air Temperature	+6 °C min / +40 °C max.
Substrate Temperature	+6 °C min / +40 °C max.
Pot Life	60 - 120 min (depending on ambient conditions)

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.

LIMITATIONS

- Insulation properties are directly dependent on the thickness and density of the insulated render.
- Trial mixes are mandatory before any application.
- Density might vary due to variations in the light-weight aggregate.
- Apply only to sound and well-prepared substrate.

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 clean, sound, dust free without any traces of oil, laitance, curing compound and other contaminants.

The substrate must be fully cured and is sound enough to receive the weight of Sikatherm®-611 Render. This is important especially for renovation works or refurbishments as old plasters might debond from the wall or ceiling surface which will cause debonding of Sikatherm®-611 Render as well.

Deeply contaminated substrate must be abraded to clean and sound surface.

MIXING

Pan Mixing

- Mixing blade should be about 2 mm above the base of the drum.
- Pan mixer with a minimum capacity of 150 Ltr is required for mixing.
- Prepare a clean empty container and pour in 80% of the required water.
- Pour the Sikatherm®-611 Render powder into the container, use the hand mixer to mix until a homogenous slurry is achieved. Small quantity of EPS beads can be added to ease the mixing.
- Load the remaining EPS beads followed by the slurry into the pan mixer.
- Start the pan mixer and mix continuously for 5 – 10 minutes until homogenous consistency is achieved. Remaining 20% water can be used to adjust the consistency of the mixture.

Hand Mixing

- Prepare a flat bottom container with 75 Ltr capacity.
- Pour 80% of the required water into the container.
- Pour in Sikatherm®-611 Render into container and start hand mixer to mix until homogenous slurry is achieved.
- Pour the EPS beads into the container and mix until a homogenous consistency.
- Ensure that the hand mixer is moved around to have proper mixing.
- Remaining 20% water can be used to adjust the consistency of the mixture.

IMPORTANT: If mixing in partial batches, ensure the measurement of powder, EPS beads and water ratio are accurate.

APPLICATION

By hand

The material from the bucket or wheelbarrow is applied with a masonry spatula/trowel directly to the wall surface by throwing and not pressing too hard like conventional plaster. The applied material is smoothed with a long aluminium slat. Leave the prepared surface to dry.

First, spread a thin (approximately 3 - 4 mm) contact layer to serve as an adhesive bridge. In this way, the surface will be cleaned of dust.

Leave this thin layer to dry until next day before applying next layer. Continue to apply Sikatherm®-611 Render in maximum layers of 4 - 5cm until the desired thickness is reached. Necessary hardening time between layer applications must be observed. Depending on weather conditions, setting may take 6 to 24 hours.

Smoothing of the Surface and Final layers

The final stage is to level and smooth the surface, but this can only be done when the material has hardened. Hardening time may take approx. 24 to 72 hours, depending on weather conditions. For any surface unevenness, sandpaper can be used to level the surface if necessary.

For protective or final layer: Apply up to 3 layers of SikaWall®-178 if necessary. Sika Waterproofing products can be added if needed. Such additional layers can be applied after the final layers have been cured for 7 days.

CLEANING OF TOOLS

- Clean mixing and application equipment with water immediately following use.
- Remove splatter or spills with water before material sets.

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Product Data Sheet

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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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