



# Styro Top KSG

Universal adhesive for thermal insulation systems on styrofoam (ETICS)



**Product advantages:**

- for the reinforcement layer and fixing boards
- flexible, fiber-reinforced
- increased adhesive capacity
- very good application properties
- long open time

**Application: POLYSTYRENE / GRAPHITE POLYSTYRENE / REINFORCING MESH / MINERAL SUBSTRATES / OPTOTHERM 2001 THERMAL INSULATION SYSTEMS**



## Product description

StyroTop KSG is a dry adhesion mortar, manufactured as a mixture of cement (gray) and quartz sand, enriched with organic-based chemical raw materials.

## Technical specification

Requirements acc. to	ETA 17/0878
Substrate adhesiveness	≥0.25 N/mm <sup>2</sup>
Polystyrene adhesiveness	≥0.08 N/mm <sup>2</sup>
Water dosing	5.2-5.7 L/25 kg
Grain	up to 0.5 mm
Consumption	for fixing 4-6 kg/m <sup>2</sup> boards for embedding 1.2-1.4 kg/m <sup>2</sup> /1 mm mesh
Drying time before anchoring	approx. 48 hours
Reinforcement layer drying time	approx. 24 hours per 1 mm of the reinforcement layer thickness
Application temperature	5°C-25°C
Expiry period	12 months
Packaging	25 kg

## Properties

Universal adhesion mortar with very good application properties, easy to apply, with a long open time. After hardening, the product creates a durable, flexible, fiber-reinforced layer resistant to weather conditions.

## Application

Optotherm StyroTop KSG is intended for providing a reinforcement layer and fixing expanded polystyrene (also graphite) insulation boards as part of Optotherm thermal insulation systems. Product properties allow its indoor and outdoor use.

## Substrate

The substrate should be bearing, even, clean, dry and free from organic contamination and other adhesive substances. In the case of non-mineral substrates (made of ceramic, stone or a mixture of cement, cement-lime and lime binders with fillers), check the adhesive's adhesion to the substrate. Very absorbent but strong substrates should be primed with the Flat primer for absorbent substrates.

The substrate should be even, larger irregularities should be filled in order to obtain a good contact substrate for fixing thermo-insulation boards.

In the case of problematic substrates, please contact the technical department.

## Preparation and application

Mix the bag's contents with approx. 5.2 to 5.7 L of clean water, using a low-speed mixer.

Mix until achieving a ductile consistency, leave for approx. 5 minutes and then mix again.

Use the prepared mass within 2 hours at the latest.

Before **fixing** polystyrene **boards**, install a starting batten, which provides support for the first thermo-insulation boards row. Insulation boards should be laid with a staggered pattern of vertical joints and so that their edges adhere tightly to each other. Fill any potential defects between the boards with insulation material. Apply the adhesive onto the entire surface of the insulation board with a notched trowel or using the circumferential-point method, applying it continuously along the circumference and in 4–6 places on the board's inner side, so that after pressing, the board's contact surface with the wall is at least 40%. Press the board down with a large float, carefully hitting its surface.

**Reinforcement layer** and concealed mesh installation should begin with substrate preparation, through drying, cleaning and removing any elements that deteriorate the adhesion of the materials used. It is recommended to sand polystyrene boards with a polystyrene grater or abrasive-coated paper and then dedust its surface thoroughly. Apply the mortar for the reinforcement layer to a thickness of approx. 3–4 mm. A fiberglass mesh should be placed at approx. 1/3 of the reinforcement layer from the outside. For this purpose, spread a mortar layer on the even surface of the insulation boards, then apply a reinforcing mesh and coat it with another mortar layer while evening it. When embedding the concealed mesh, remember that it should be evenly tensioned and embedded entirely in the mortar. Adjacent mesh strips should be laid vertically or horizontally with an overlap of not less than 10 cm. The reinforced layer surface should be smooth and even, while the mesh should not be visible.

## Conditions of use

Air, substrate and product temperatures should range between from +5 to +25°C. Temperatures above or below the optimum temperature negatively affects the product's properties. An insulated façade should be protected against negative temperatures, direct exposure to strong wind, rain and sun, at least until the last layer is dry. The first three days are the most crucial for exposure (frost, dryness, precipitation). When performing insulation works, general construction principles must be followed. No foreign admixtures can be added to the mortar and only clean water may be used for mixing.

**Note:** Due to the graphite polystyrene's deformation potential with large temperature differences, do not install heated graphite polystyrene. It should also be protected against heating during installation and during initial adhesive setting. Heating graphite polystyrene at any of the above-mentioned stages may result in detachment of the polystyrene from the adhesive.

Scaffold netting should be used during construction works.

## Drying time

In the case of a thin reinforcement layer, visual inspection and touch are generally sufficient to assess the moisture level. No darker stains, an evenly lightened color is a good sign that the undercoat is dry enough to proceed to the stage of works preceding the execution of the thin-layer plaster, i.e. priming. As a general rule, 24 hours are required for every millimeter of layer thickness under normal humidity and temperature.

In the case of a mortar for fixing polystyrene, it is important to ensure the minimum time needed for setting and achieving the desired strength, enabling the next stage of insulation works.

Therefore, mechanical fixing (anchoring) of polystyrene should not be performed earlier than 48 hours after fixing the polystyrene with an adhesive.

## Storage

Protect the product from moisture and store in a dry place on pallets, in the original packaging. Re-seal packaging once opened.

Storage time: 12 months in closed, original packaging, at a temperature of above +5°C. The production date is printed on the side of the bag: the second and third digits indicate the year, the last three digits indicate the day of the production year.

## Disposal

Only completely emptied packagings are suitable for recycling. Dried remains of material may be treated as construction.

## Safety notes

Highly alkaline reaction in wet and moist conditions. Use standard skin, eye and respiratory system protection. After skin contact, rinse thoroughly with water. After contact with eyes, seek medical attention additionally.

## Supervision

The product is controlled by the Hufgard Optolith Bauprodukte Polska Sp. z o.o. laboratory and external bodies in accordance with the applicable regulations and quality assessment system.

## Further information

The above information constitutes product description. Treat them as general guidelines based on our research and experience, which may however not take into account the requirements of specific applications. Therefore, we recommend performing your own tests. Product parameters may be subject to minor variations without impacting the use properties and processing. No compensation claims shall result from the information provided.

The product for which the data sheet has been drafted is a component of thermal insulation systems. Only materials listed in the European Technical Assessments (ETA) may be used for the thermal insulation system. This applies to all components of a particular system, including: insulation materials, reinforcement meshes and fixing elements.

The manufacturer declares that the parameters indicated for a particular system are met if only the components that are specified in this system are used and only in the configurations provided in the system.

All design and execution works should be conducted by persons qualified and trained in this respect.

## Reference documents

The product is compliant with:

ETA -17/0878 Optotherm 2001

Declaration of performance no. DOP-ETA-2001/18

Certificate ZKP ITB No. 1488-CPR-0451/Z

Website with declarations of performance (DoP) for Optolith products: [www.optolith.pl](http://www.optolith.pl); Product ID:

Optotherm StyroTop KSG