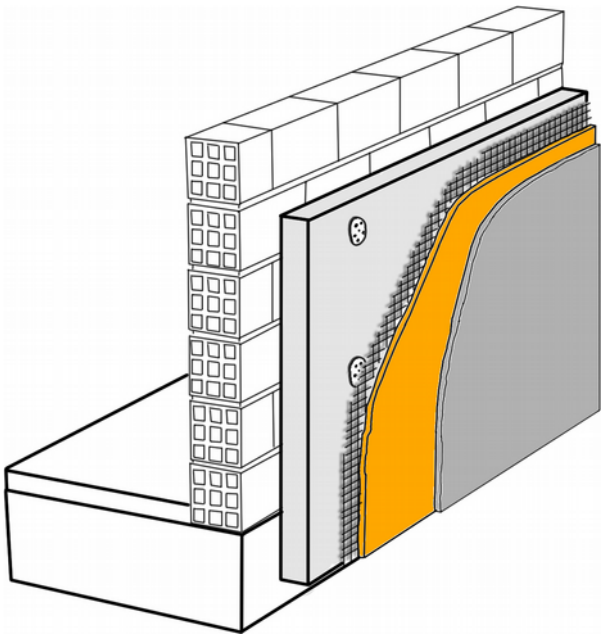
External thermal insulation composite system

LV30_SA_EN_R4-0919



APPLICATION DATA SHEET

Thermal insulation coat through:

1. **preparation of the substrate;**
2. **laying of the thermal insulating panels;**
3. **skimming and finishing coats;**

1) PREPARATION OF THE SUBSTRATE

Before applying the system **KIMITHERM**, it is necessary to check that the surfaces are clean, dust-free and that there are no traces of releasing agents, greasy, oily stains or any other substance that could compromise the adherence of the panel to the substrate. It will also be necessary to check: strength of the surface, its planarity, presence of cracks and presence of rising damp problems.

- Masonry and / or brick buildings without plaster

First of all it will be necessary to evaluate the strength of the surface and eliminate any parts that are detached. In the case of dusty surfaces, the use of a consolidating primer such as **Kimitech K60** or **Kimistone KSF** can be evaluated. As far as the flatness of the substrate is concerned, the presence of joints between bricks and/or excessively hollowed stones must be checked and they must be leveled using grout mortar with mechanical characteristics appropriate to the substrate (consult our Technical Department).

If the substrate presents irregularities due to the type of ashlars used or to the construction equipment, its flatness must be restored by plastering with mortars having high adherence to the substrate and mechanical characteristics compatible with it (consult our Technical Office).

If the substrate is subject to capillary rising damp, do not apply the insulation coat system. In this case the insulation must be applied after a restoration of the masonry using dehumidifying macroporous plaster and chemical barrier if needed (consult our Technical Office).

- Plastered buildings

In the case of buildings in reinforced concrete or in plastered masonry, it will be necessary to check its consistency and eliminate any detached parts. Then proceed with the reconstruction of the removed parts by applying suitable mortars with high capacity of adherence to the substrate and mechanical characteristics compatible with it (consult our Technical Office).
In the case of plasters with paints, it must be checked that they adhere to the substrate, otherwise the degraded and/or peeling parts will be removed and subsequent brushing and hydro-washing will be performed.

- Cracked non-load-bearing structures

If there are any cracks and the designer considers them stable (i.e. they are sure that they will not undergo dimensional changes over time), before applying insulation system **KIMITHERM**, the facade will be cleaned and larger cracks will be closed using polyurethane sealant **Tecnoseal 130** or similar. If the designer believes that the cracks may undergo dimensional variations over time, do not apply the insulation coat system.

- Structures and/or elements in reinforced concrete

In the case of reinforced concrete walls, both existing and newly constructed, a hydro-cleaning will be carried out in order to remove residues of release agent, flaky parts and any trace of dust, oil or grease.
In the case of concrete surfaces that are damaged, with incipient detaching phenomena of the steel cover, it will be necessary to proceed with a concrete restoration intervention (see the referring technical document).

2) LAYING OF THE THERMAL INSULATING PANELS
Once the condition of the substrate has been checked and it has been properly cleaned, starting profile **Kimitherm ALU-START** will be positioned at a distance of 1-2 cm from the structure's laying surface. Verify the horizontality of the profile used by means of a level and fix it with expansion dowels (generally with a center-to-center distance of 25 ÷ 30 cm).

Cut the panel according to the required to size, if necessary, and apply the mortar **Betonfix TERMORASA** to be used as an adhesive, according to the consumption rates indicated in the Technical Data Sheet, following one of the below-mentioned two methods:

- bonding with perimetral bands and central points: a mortar permitral edge of about 5 cm will be made, and in the center of the panel two or three mounds of product ensuring to obtain a gluing surface equal to or greater than the 40% of the substrate.

- Full surface bonding: the smoothing mortar will be applied to the entire surface of the insulating sheet using a notched trowel.
This type of bonding is possible only in the case of substrates with sufficient flatness.

The insulating panels must be positioned, starting from the bottom upwards, with vertical joints offset and beaten with trowel, checking at regular intervals the flatness of the laid sheets.

Once the laying is completed, proceed with a leveling bar to check the flatness of the entire surface. It is advisable to proceed with the installation of the panel immediately after the laying of the skim coat on the back, especially in hot and windy weathers.

After drilling a hole, fix the panels using fixing system **Kimitherm T-CONNECT** consisting of a PEHD dowel and a PA 6 linchpin, being sure to penetrate the substrate for at least 3 cm.

3) SKIMMING AND FINISH COATING
Once set, where necessary, all the complementary elements (corner guards, corner pieces, etc.) up, in a period of time between 3 and 4 days after the positioning of the insulation sheets, depending on the environmental thermohygrometric conditions, a first layer of skimming mortar **Betonfix TERMORASA** will be laid evenly, in order to cover these elements, using a stainless steel trowel creating a first layer with a thickness of approximately 1-2 mm according to the consumption rates shown in the Technical Data Sheet.

On this still fresh layer, fiberglass reinforcing mesh **Kimitech 350** with an anti-alkaline finish of ~ 160 g / m2 should be laid, taking care to completely soak it in the base layer, using a further spreading with an "American" spatula.

The mesh will be placed vertically with a 10 cm overlap at the joints. The necessary reinforcements will be obtained by doubling the mesh.

Subsequently a second layer of skim coat should be applied, mortar such as **Betonfix TERMORASA** will be used to achieve a thickness of about 1-1.5 mm.

The quantity of product used for the second coat must be the one specified in the Technical Data Sheet.
Once cured and not before 28 days proceed with the application of any finishing layers that must be compatible with the coat system **Kimitherm** and with the base layer of the plaster **Betonfix TERMORASA**.

For any finishing layers it will be possible to proceed with one of the following cycles, consisting of a primer and a finish.

Cycle with acrylic finishing plaster
Application of primer **Kimipaint HYDRO**, respecting a consumption of 0.1 l / sqm. The primer will be applied with a roller and a brush. Then proceed with the application of colored thick continuous coating **Kimipaint DECO**, respecting the consumption rates indicated in the Technical Data Sheet, according to the thickness of the covering to be made.

Cycle with siloxanic finishing plaster
Application of the siloxane water fixative **Kimipaint SIL BASE**, respecting a consumption of 0.1 lt / sqm. The primer will be applied with a roller and a brush. Then proceed with the application of the continuous colored coating based on siloxane resins **Kimipaint SIL TOP**, respecting the consumption rates indicated in the Technical Data Sheet, according to the thickness of the covering to be made.

Cycle with acrylic finishing paint
Application of cementitious primer **Betonfix R52**, respecting the consumption rates indicated in the Technical Data Sheet. Then proceed with the application of colored mineral paint **Kimipaint EASY**, respecting the consumption rates indicated in the Technical Data Sheet.