



ICC Premiscelati

THERMOKLIMA

**HIGH PERFORMANCE ADHESIVE AND
SMOOTHING AGENT WITH IMPROVED
WORKABILITY FOR THE INSTALLATION OF
EXTERNAL THERMAL INSULATION SYSTEMS
WITH A FINE GRAIN FINISH.**



Description:

THERMOKLIMA is used as an adhesive and skim coat for the construction of high-quality and impact-resistant thermal insulation systems, such as external facades, attic spaces, basements, and small basements. It can be used both indoors and outdoors and is ideal for under-tile insulation, ventilated facades, radiator niches, etc.

THERMOKLIMA is a grey or white cement mortar, made from high-strength cement, selected aggregates, mineral fibers, and modified with synthetic elasticizing additives.

Application fields:

Bonding and skimming of polystyrene (expanded or extruded), expanded polyurethane, cork, mineral fiber panels (rock wool) or equivalent materials on walls or ceilings, on masonry substrates, concrete, cement-based plaster, mortar blends, etc.

Skimming of absorbent or non-absorbent surfaces: plaster, concrete, precast concrete panels, old paint or plastic finishes, etc.

Preparation of substrates:

Ensure that the substrates are mature, solid and consistent, sufficiently flat, free from oil, grease, dust, loose parts, paint, and dirt in general. Any depressions or unevenness should be corrected using a skim coat from the **Industria Calce Casertana Srl** catalog. Slightly dusty surfaces can only be covered after treatment with the appropriate **ICC GRIP** consolidating primer.

Preparation of mortar:

THERMOKLIMA is mixed using a mixer or a low-speed drill with a whisk attachment, with approximately 5.5 ÷ 6 liters of clean water per 25 kg bag of product, until a creamy, homogeneous mixture free from lumps is obtained. Allow the mixture to mature for about 10 minutes. Briefly re-mix the mortar and begin operations. The obtained mortar can be used for approximately 4 hours.

Application:

Check the flatness of the substrate:

- If the panels are applied directly on brick (poor flatness), apply a bead of adhesive measuring 5 ÷ 8 cm in width and 2 ÷ 3 cm in thickness using a trowel. Apply the bead along the entire perimeter of the panel and on the two diagonals to form an "X" in the center of the panel. Only indoors, THERMOKLIMA can also be applied in spots using a regular trowel. Press the panel against the surface by tapping it with your hand or a wooden float to ensure proper adhesion of the adhesive mortar to the substrate. Always ensure that the minimum bonding area is greater than 40% of the total panel surface.
- On level substrates such as plaster, concrete, or reinforced concrete, apply the adhesive on the entire surface of the panel using a 10 mm notched trowel. In outdoor applications or with heavy or large panels, it is always recommended to fully cover the surface of the insulation panel by applying the mortar with a notched trowel; always follow the instructions provided by the panel manufacturer. During the placement of the panels, it is necessary to frequently check the flatness of the surface using a metal straightedge.

In external walls, it is always necessary to additionally fix the panels using suitable expansion plugs that should be applied after the adhesive has started to set.

Wait for the adhesive to harden for at least 48 hours, then apply a layer of **THERMOKLIMA** with a 10 mm notched trowel on the entire panel and cover it with a special alkali-resistant fiberglass mesh. Use a smooth steel trowel to "bury" the mesh by incorporating it into the adhesive without smoothing its surface. In joints, the edges of the mesh should overlap by about 10 cm.

Wait for the product to harden for about 24 hours, then apply an additional layer of **THERMOKLIMA** with a thickness of about 2 ÷ 3 mm; the total thickness of the skim coat should be 5 mm. The second layer of skim coat can be "finished in a civil manner" if desired. Additional finishes can only be applied after maturation (approximately three weeks). As a surface finish, it is recommended to apply an acrylic or acrylic-siloxane-based paste tonachino with elastic and water-repellent characteristics.

Consumption:

- For "spot" bonding, approximately 3 ÷ 4 kg/m² are needed.
- For bonding with a notched trowel on the entire surface, approximately 4 kg/m² are needed.
- For skimming the panels, approximately 1.5 kg/m² are needed for each mm of applied thickness.

TECHNICAL DATA

Consistency	Grey or white powder
Maximum grain size:	0,8 mm
Bulk density (fresh mortar):	1,6 gr/cm ³ approx.
Mixing water per 25 kg bag	5,5 - 6 lt
Working time	approx. 4 hours*
Allowed application temperatures	from +5°C to +35 °C
Execution of surface skim coat	at least 24 h* from the installation
Execution of second layer of skim coat	after approx. 24 h* from the first
Application of any finishes	after approx. 15÷21 days*

FINAL PERFORMANCE

Adhesion to polystyrene panel (EPS)	≥ 0,1 N/mm ² (Broken panel)
Adhesion to concrete	≥ 1 N/mm ²
Adhesion to brick	≥ 0,5 N/mm ²
Thermal conductivity $\lambda_{10, dry, mat}$	0,46 W/mK (tabulated value)
Impact and puncture resistance:	very good
Aging resistance:	excellent
Moisture resistance:	excellent

*Data expressed at (23±2)°C and (50±5)% relative humidity. Lower temperatures prolong maturation and hardening times.

Cleaning of equipment:

Wash hands and equipment with plenty of clean water before the product starts to set; mechanical means will be required afterwards.

Hygiene and safety:

EUH 208 Contains cement. May cause an allergic reaction. The Portland cement in the product can cause skin irritation and serious eye damage. Do not breathe dust, ventilate the area during mixing, and adequately protect yourself with gloves, protective clothing, and goggles. Read the instructions on the packaging carefully before use and consult the Safety Data Sheet.

Packaging:

THERMOKLIMA is supplied in 25 kg bags on wooden pallets weighing 1500 kg each.

Storage:

Store the product in intact original packaging in cool, dry areas. Do not disperse the dust. Product compliant with DM 10/05/2004. Cr VI content below 2 ppm. The properly stored product should be used within 6 months from the packaging date stamped on the bag.

Warnings:

- Non Do not use on metal, wood, plastic, or surfaces subject to heavy movement.
- Do not use on particularly smooth panels or panels coated with protective films.
- If necessary, level surfaces with a skim coat from the **Industria Calce Casertana Srl** catalog and wait 48 hours before starting panel installation.
- As a skim coat, do not use in thicknesses greater than 5 mm total.
- In external facades, use mechanical fixing with plastic mushroom head in combination.
- Protect the completed work for at least 48 hours from rain, washing, or freezing and for at least 7 days from direct sunlight.
- Do not apply on frozen substrates or at ambient temperatures below +5°C.
- It is recommended not to add foreign products.

PRODUCT FOR EXCLUSIVE PROFESSIONAL USE

All data and information provided in this technical data sheet, although resulting from laboratory tests and our direct application experience, are purely indicative due to the infinite variables associated with site conditions. Therefore, before applying the product, the user is responsible for determining if it is suitable for their intended use, in the specific hygrothermal and application conditions expected at the time of use, and assumes all responsibility. We are not liable for any damage to people or property resulting from improper use of the product.