



Transform your project with Suberlev from Falconstema, an innovation in thermal and acoustic insulation.

THERMOLEV® ECO S.A.T.E. Thermal Mortar



Technical sheet

DESCRIPTION

SATE is an external and internal thermal insulation system. This lime-based mortar contains thermo-expanded volcanic rock, recycled EPS beads (making up 80% of its volume), and specific additives. It is designed to provide a thermal insulation layer in the form of a render for both exterior and interior surfaces.

APPLICATION

Recommended for:

- **Seamless thermal insulation**, preventing thermal bridges.
- **Acoustic insulation** for various spaces.
- **Renovation** of new builds or restoration of façades.
- **Leveling** of substrates.
- **Remediation of rising damp** in interior and exterior plinths or baseboards.

PROPERTIES

- **Excellent thermal insulation.**
- **High resistance** to weather exposure.
- **Long-lasting** over time.
- Levels out surface imperfections, preventing further deterioration.
- Improves room acoustics.
- **Water-repellent**, does not absorb water.
- **Non-toxic** and **biodegradable**.
- **Breathable.**
- Allows water vapor to pass through.

SURFACES

- Masonry substrates such as brick, cement, concrete, concrete blocks, etc., with a lime or cement base.
- Surfaces must be clean, compact, absorbent, and of mineral origin.

SURFACE PREPARATION

- Ensure the substrate is **firm, clean, and free of loose particles.**
- It is recommended to **moisten** the surface with clean water.
- For **large surfaces**, plan for appropriate breaks at joints, around downspouts, and at corners and edges, or install suitable expansion joints.

INSTRUCTIONS

- **Initial Application:** On the moistened substrate, apply a slurry made with **Thermolev ECO** and 30 L of water per 50 L bag. This helps to fill pores and improve adhesion for the first layer.
- **Mixing:** Mix Thoroughly mix the product with **15–18 L of water per 50 L bag** (adjust depending on application technique) until obtaining a dense, homogeneous paste. Do not add water during application.
- **Application:**
 - Thethermal mortar **Thermolev ECO** can be applied manually with a trowel (preferably plastic) or mechanically using **Suberlev's special application machines**.
 - Use **spatulas, trowel, or profiles** (aluminum/wood) for corners, edges, etc.
- **Leveling:** Once **Thermolev ECO** is applied, level the surface before applying **Flexilev**.
- **Reinforcement:**
 - Apply **FLEXILEV** fiber-reinforced mortar over the moistened **Thermolev ECO** surface to even out and smooth the finish in two layers of about 2 mm each.
 - **Embed a 160g/m² mesh** between these layers, leaving the surface ready for the final finish.

RECOMMENDED CONSUMPTION

- **2 - 2.5 kg/m²** per cm of thickness.
- Maximum thickness: 3 - 4 cm per layer (depending on whether applied by hand or by machine).

RECOMMENDATION OF USE

- **For professional use only.**
- **Application temperature:** 5–35 °C.
- **Do not apply** if there is a risk of **frost, direct sunlight, strong wind, or rain**.
- **Avoid** working in **excessive wind, direct sun, or rain** during drying.
- **Clean tools** with water **immediately** after use. Dried residue may require mechanical removal.
- Follow local and national regulations for waste disposal.

SALES FORMAT

- 50 L bags (approx. 11 kg per bag).

STORAGE

Store in a **cool place**, at a temperature between **5 - 45°C**, away from exposure to sunlight and frost. **Up to 3 years** from the date of manufacture, in the original container sealed and protected from moisture.

SPECIFICATIONS / TECHNICAL DATA SHEET

- **Appearance and color:** off-white
- **Appearance :** Paste
- **Grain size:** $\leq 1,5 - 2,5$ mm
- **Thinner:** Water between 15 - 18 L (per bag)
- **Thermal conductivity:** 0,05 W/m.K - Standard: EN 12667
- **Density:** 220 kg/m³ 20 - Standard: EN 1015 – 10
- **Mechanical strength:** 0,50 N/mm² - Standard: EN 1015 – 11
- **Mechanical compressive strength:** 0,85 (class) - Standard: EN 1015 – 11
- **Capillarity:** W 2 - Standard: EN 1015 – 18
- **Fire resistance:** Clase B-s1, d0
- **Drying time:** 1,50 cm thick per day, variable depending on absorption and humidity
- **Working time:** 0,45 min to 1,15 hours

PRECAUTION

- Keep out of the reach of children.
- For professional use only.
- Irritating to eyes and respiratory system.
- Avoid skin contact.
- In case of contact with eyes, rinse immediately with plenty of water and consult a specialist.
- Wear appropriate protective clothing.

STANDARD

Thermal conductivity: EN 12667
Density: EN 1015 – 10
Mechanical strength: EN 1015 – 11
Mechanical compressive strength: EN 1015 – 11
Capillarity: EN 1015 – 18
Sound absorption certificate: ISO 354:2023
CE 18 NEIN. DoP: 06 UNE-EN 998-1

NOTE

SUBERLEV products must be applied by applicators approved by the manufacturer.

The above information is based on our practical experience and laboratory tests. Given the wide variety of construction materials available and the many application methods beyond our control. It is essential to carry out sufficient practical tests and verifications in each case to ensure the compatibility of the product with each specific application.

