

## Raso Top Bio

**Fibre-reinforced mineral skim coating/adhesive made solely with natural hydraulic lime NHL 5 certified in accordance with UNI EN 459-1. The extremely high breathability and outstanding adhesion properties make it ideal for the construction of biocompatible thermal insulation systems**

**Raso Top Bio** is a biocompatible skim coating/adhesive, certified as GP mortar in accordance with the **UNI EN 998-1** standard, specifically designed for applications requiring extremely high breathability. The special formula of **Raso Top Bio** lends the product excellent adhesion to the majority of substrates used in construction, combined with high spreadability during application. Owing to the addition of pozzolanic reagents, selected sands and specific additives, **Raso Top Bio** meets the strictest requirements in terms of environmental friendliness.

**Raso Top Bio** is recommended for work in **licata** external solid insulation systems and in the majority of work aimed at repairing/restoring construction heritage as a skim coating with superior permeability to water vapour properties.



### MAIN AREAS OF APPLICATION

**Raso Top Bio** can be used on the majority of substrates commonly used in construction, for work on both new and existing buildings. It is mainly intended for use in:

- **licata** external solid insulation systems with natural breathable panels such as wood fibre, rock wool or cork
- Lime based renders
- Lime/cement based renders
- Brick
- Prefabricated concrete or cast in-situ
- Autoclaved aerated concrete
- Old paintwork and coatings provided they are clean, consistent and well anchored to the substrate

**Raso Top Bio** is also recommended in **licata** external solid insulation systems with classic panels such as EPS, graphite EPS or XPS (only for low bottom board strips).

For application on other types of substrates, please contact our engineering department.

### CHARACTERISTICS

- Biocompatible product: owing to the addition of pozzolanic agents, selected sands and specific additives, **Raso Top Bio** meets the strictest requirements in terms of environmental friendliness.
- Easy workability. The combined spreadability, easy detachment of tools and simple working are obtained thanks to the use of latest-generation additives, reducing the level of difficulty and any delays in the laying process.
- Regulating: **Raso Top Bio** can also be used as a "regulating" product on extra thick surfaces that are not flat (up to 10 mm).
- Extra high breathability: the natural properties of hydraulic lime combined with inert materials with a controlled particle size curve make for exceptional permeability to water vapour, making **Raso Top Bio** ideal for use in breathable thermal insulation work (rock wool, cork or wood fibre).
- Outstanding wetting and thixotropic properties. • The special additives contained in **Raso Top Bio** make for easy application both vertically as well as over-head.



- Controlled hygrometric shrinkage. The presence of fibres, the natural hydraulic lime NHL 5 contained and the special formula of **Raso Top Bio** minimise cracking.
- Outstanding styling finish. Thanks to the inert materials selected in a constant particle size curve with a maximum head of < 1.0 mm the finishes accomplished with **Raso Top Bio** allow paint or decorative treatments to be achieved even without further working.

## APPLICATION METHOD

### Preparing the substrate

Mechanically remove all flaking parts or easy to peel off. Clean the area of application thoroughly so that it is free of dust residue from surface treatments such as: detergents, oily substances, mineral or organic greases, waxes, traces of gypsum and salt.

### Preparing the mixture

You need 5.5-6 litres of clean water (UNI EN 1008) for every 25 kg bag (i.e. 22-24% in mass).

Pour the product into a clean tub, containing  $\frac{3}{4}$  of the mixing water, mix for around 3 minutes with a mixer at low speed, gradually adding the remainder of the water until you achieve an even thixotropic mixture without any lumps. For ideal application, leave the mixture to rest for a few minutes. Avoid splitting the packs to perform partial mixtures.

The product stored in open bags and only used in part may no longer meet the technical characteristics listed in this document.

### Application

#### • Bonding:

Wet the substrate before application. On unfinished and un-rendered surfaces, apply the product in 2/3 rings in the middle of the panel and along the perimeter. On rendered or flat surfaces, apply the adhesive on a full bed using a toothed trowel.

#### • Skim coating:

Apply a first coat using a smooth normal trowel evenly and flat, embedding the **Licatatherm 160** mesh into it in vertical strips and overlapping the joints for at least 10 centimetres.

Apply a second coat at least 24 hours after the first coat, so as to cover the reinforcement mesh entirely, then skim with a sponge float when the product starts to dry.

To regulate thicknesses of more than 10 mm, proceed by applying another coat onto the hardened first coat.

Do not apply **Raso Top Bio** on substrates if there is a film of water on the surface, if they are completely dry (in the case of cement substrates) or in extreme conditions, such as: walls exposed to the midday sun or frozen over.

Make sure the temperature of the room, of the substrate, and of the product during application falls between +5 °C and +35 °C.

## PRODUCT INFORMATION

Appearance	beige powder
Particle size	< 1 mm
Powder consumption (bonding)	between 4 and 5 kg/m <sup>2</sup> on full surface between 3.5 and 4.5 kg/m <sup>2</sup> for points/perimeter
Powder consumption (skim coating)	between 3.5 and 4 kg/m <sup>2</sup> (1.1-1.2 kg/m <sup>2</sup> per mm in thickness)
Mixing water	22-24% of powder weight
Workability time at 20 °C	≈ 30 minutes
Application thickness per coat	3-10 mm
Application temperature	between +5 °C and +35 °C
Storage	12 months in a dry, protected place in sealed packs, at temperatures of between +5 °C and +35 °C
Packaging	25 kg bag
Density	1470-1530 kg/dm <sup>3</sup>

**PERFORMANCE LEVELS required according to**

Characteristic	Test Method	Normative requirement	Performance
Dry bulk density	EN 1015-10		1470-1530 kg/m <sup>3</sup>
Compression resistance	EN 1015-11	CS I - CS IV	CS II
Adhesion	EN 1015-12		≥0.13 MPa
Fracture pattern	EN 1015-12	A, B, C	B
Capillary water absorption	EN 1015-18	W0-W2	W0
Water vapour permeability coefficient (μ)	EN 1015-19	≤15	≤12
Thermal conductivity (λ)	EN 1745		0.4 W/mK
Reaction-to-fire Euroclass	EN 13501-1		A1

**WARNINGS**

- Professional-grade product.
- Alkaline material: protect your eyes and skin during application.
- After use, wash tools with water while the mixture is still fresh.
- The room temperature and degree of humidity affect the workability, grip and drying times.
- Monitor the product curing suitably for at least the first 24 hours after laying, protect fresh mortar against rapid drying, against direct sunlight, strong wind and heavy rain.

**SAFETY**

As regards the information concerning proper product disposal, storage and handling, please consult the relevant Safety Data Sheet.

**NOTES**

This technical data sheet replaces and cancels all previous versions.

The indications and performance levels provided in this document are based on our current technical-scientific knowledge and in any case should be considered as purely indicative since the conditions of use are in no way under our control. The purchaser must therefore check the suitability of the product for his or her specific needs, assuming all responsibility deriving from its use. Our technical-sales network guarantees a speedy response and is at your disposal for any clarifications or queries regarding the use and processing of **licata SpA** products.

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