



## 242 CalceClima® Thermo

### Lime Insulation Plaster

#### Areas of application:

Thermal insulation plaster according to DIN EN 998-1 with pure mineral lightweight aggregates and thermal conductivity level WLS 044 (measured according to ISO 8301).

Corresponds to the technical specification of thermal insulation plaster mortar of the Association for Insulation Systems, Plaster and Mortar e.V. (VDPM).

Combines excellent insulation performance with economic efficiency. Its lime-based formula with pure mineral lightweight aggregates makes it ideal as an ecological thermal insulation plaster for indoor and outdoor use.

The very good suitability for soft and insulating substrates such as lightweight perforated bricks, thermal insulation bricks, lightweight concrete, etc. makes it universally applicable. The seamless thermal insulation plaster can be used in a layer thickness of up to 45 mm per layer for old and new buildings.

As a subsequent insulation plaster protective layer, we recommend HASIT 250 RENOPLUS® or HASIT DIEPLAST 865 MINERAL with our HASIT White Insulation Fabric.

All HASIT LITHIN® finishing plasters (except HASIT 725 OPTI LITHIN® Kratzputz opti) can be used as finishing plaster.

#### Properties:

- Lime-based thermal insulation plaster
- Pure mineral, 100% recyclable
- Free of biocides and plastics
- Diffusion-permeable and water-repellent
- Alkaline, high resistance to mold and algae
- Non-flammable
- Machine compatible
- Very economical

#### Application procedure:



Technical data	
SAP-Art. Nr.:	2000959987
Packaging type	
Unit per pallet	30 unit/Pal.
Quantity per unit	60 l/unit
Yield per litre	approx. 60 l/unit
Consumption	approx. 1 l/m <sup>2</sup> /mm
Consumption instructions	Consumption values are guideline values and depend heavily on the substrate and processing technology.
Amount of water required	approx. 19 l/unit
Minimum plaster thickness	20 mm
Dry density	approx. 175 kg/m <sup>3</sup>
Water vapour diffusion $\mu$	$\leq 4$
Thermal conductivity $\lambda_D$ (EN 12667)	$\leq 0.042$ W/mK
Compressive strength (28 d)	$\geq 0.4$ N/mm <sup>2</sup> (EN 1015-11)
pH-value	approx. 10.5
MG (EN 998-1)	CS I
MG (EN 998-1)	W1
MG (EN 998-1)	T1
Packaging	In recyclable paper bags.
Reaction to fire (EN 13501-1)	A2-s1, d0



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<b>Preparatory work:</b>	<p>The surface has to be dry, without dust, unfrosted, absorptive, flat, sufficiently rough and bearing as well as without efflorescence and release agents creating a film (such as formwork oil and similar).</p> <p>Substrate testing must be carried out in accordance with DIN 18350.</p> <p>The processing instructions apply to masonry manufactured in accordance with standards and require closed joints. Open masonry joints and blowouts must be sealed beforehand with suitable material. The material must be completely dried out before applying plaster.</p> <p>In the case of critical substrates (such as highly porous masonry, aerated concrete, wood-wool panels, jacketed concrete blocks, XPS-R panels, etc.), the special processing guidelines must be observed.</p>
<b>Material base:</b>	<ul style="list-style-type: none"><li>• Sulphate-resistant binder based on natural hydraulic lime</li><li>• High-quality crushed lime sand</li><li>• Mineral</li><li>• Mineral, highly heat-insulating lightweight aggregate</li><li>• Additives to improve processing properties</li><li>• Air-entraining agents</li><li>• Water-repellent additives</li></ul>
<b>Application conditions:</b>	<p>During the processing and drying phase, the ambient or substrate temperature must not fall below +5 °C and must not rise above +30 °C.</p> <p>During processing and hardening of the material, but at least for 7 days, protect it from the effects of frost and driving rain.</p> <p>The scaffolding may need to be suspended accordingly.</p> <p>High humidity indoors or fog outdoors prevents drying.</p> <p>Lime plasters need carbon dioxide from fresh air to set and must be able to release water into it at the same time. Therefore, sufficient fresh air supply must be ensured in poorly ventilated rooms (e.g. fans). Dehumidifiers are unsuitable for the rapid drying of lime plasters that have not yet set (risk of cracking) and must therefore not be used.</p>
<b>Surface pre-treatment:</b>	<p>After completion of the inspection and preparation of the substrate (closing of slots, joints and defects), the substrate must be pre-sprayed with a spray grout (HASIT HASOLAN® – non-hydrophobic) (old masonry 40–60 %, new masonry 90 % covered).</p> <p>The resulting sinter skin should be removed with a broom.</p> <p>Smooth, non-absorbent or slightly absorbent substrates must be provided with a bonding bridge (made of HASIT 250 RENOPLUS®) to improve adhesion and be reworked after 24 hours of holding time.</p> <p>If substrates that are not sufficiently load-bearing (e.g. old plasters, paints) are to be plastered, a Welnet plaster support system must be installed before the thermal insulation plaster can be applied, as it is the case if insulating plaster layers of more than 90 mm are used.</p> <p>When using plaster profiles, the leaflet for the planning and application of metallic plaster profiles in outdoor and indoor areas of the European Association of Profile Manufacturers must be observed.</p>
<b>Preparation:</b>	<p>In the case of manual processing, mix a bag with clean water homogeneously according to the amount of water required by means of a rotor whisk or in a forced mixer.</p> <p>Mixing time for manual mixing between 2 and 3 minutes, avoid longer mixing times.</p>

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<b>Application procedure:</b>	<p>For manual processing, apply the mixed material with the trowel or skim it on with the float. In the case of machine processing with PFT G4 the following insulating plaster equipment must be used:</p> <ul style="list-style-type: none"><li>• 2000952680 Insulating plaster TEC MW 180 mixing spiral,</li><li>• 2000952681 Insulating plaster TEC PP-RZ rotor with pin,</li><li>• 2000952683 Insulating plaster TEC NM agitator,</li><li>• 2000952684 Insulating plaster TEC PP-S Stator.</li></ul> <p><b>It is recommended</b> not to use the baffle plate in the injection hood above the cell wheel and to remove it before plastering. The insulating plaster mortar is sprayed on evenly and in a bead shape using a 12 mm green or blue conical spray nozzle. The minimum length of the wet conveying hose for optimal results is 20 m, the maximum hose length is 30 m. It is recommended to use a wet conveying hose NW35 for the first 10 or 20 m and a NW25 hose for the last 10 m. During machine processing, the mixing pump and hoses must be emptied and cleaned for at least 15 minutes before interrupting work. After application, smooth the mortar using a lath and, after allowing it to stand for 1 day, roughen each 3 mm layer of plaster using a screed for subsequent coating. After smoothing, the plaster must be primed with HASIT PP 201 SILICA LF before further coating. The thickness of a single layer can be up to approx. 60 mm, depending on the substrate and consistency of the mortar. For thicker layers, multiple layers must be applied wet-on-wet. Always apply the plaster mortar from bottom to top, i.e. work bottom-up. The layer thickness of the last coat to be smoothed must not be more than 20 mm in order to achieve the best possible surface quality when smoothing. Surfaces of individual intermediate layers remain in the spray pattern and do not require roughening. As soon as one layer of plaster is sufficiently stiffened (possible on the same day in good conditions), apply the next layer of plaster. If an intermediate layer remains in place for more than 3–4 days, this surface must be roughened. We recommend pre-wetting the substrate before applying another layer of insulating plaster or the subsequent mesh filler. During setting, especially when using heaters, good drying and curing conditions (e.g. through shock ventilation) must be ensured. Direct heating of the plaster is not permitted. Drying time before applying the final coating at least 10 days or 1 day per 5 mm of plaster thickness. After the primer has dried, the subsequent reinforcing layer is HASIT 250 RENOPLUS® with embedded HASIT white reinforcement fabric obtaining a layer thickness of 4–6 mm. Before applying the finishing coat and the subsequent paintwork, check that the substrate is completely dry. Thermal insulation plaster is not suitable for splashing water and as a base plaster.</p>
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<b>Hazard statements:</b>	Please refer to our separate safety data sheets for detailed safety instructions. Read through these before use.
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<b>Storage:</b>	Store in a dry place and protect against moisture. Properly stored, in an unopened container, the product is low in chromate in accordance with Regulation 1907/2006 EC Annex XVII at +20 °C, 65 % RH. Minimum shelf life 12 months after production (date of manufacture see packaging imprint).
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**Certificates:**





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### General information:

This technical data sheet substitutes and annuls the previous editions of the same.

Time-based values refer to standardised climatic conditions (+20 °C/65 % relative humidity).

These can vary due to environmental factors, such as temperature, moisture and type of substrate.

The data is processed carefully and conscientiously, however they do not provide a warranty for the accuracy and completeness of the same, nor are they responsible for future decisions of users. These data itself is not based on legal relations or other additional obligations. These data do not release the customer from the obligation to check whether the product is suitable for its intended purpose.

Our products, as well as all raw materials contained in them, are subject to continuous monitoring in order to guarantee consistent quality.

If you have further questions, please contact your sales advisor or specialist retailer.

The current status of our technical bulletins can be found on our website or can be requested in the responsible office.