

weber.therm 507

Insulating render

Mineral insulating render with low thermal conductivity

Fields of application

As heat-insulating underlay render. Can be used as additional insulation of heat-insulating masonry (for ex. lightweight vertically perforated bricks, lightweight concrete or aerated concrete).

For use also as levelling mortar for deep unevennesses (up to 100 mm) on masonry.

The **weber.therm** insulating render system consists of following components: bondcoat + insulating render **weber.therm 507** + reinforcement layer + woven mesh **weber.therm 310** in case of thin-layer mineral overlay render (EN 998-1) on top or without reinforcement layer in case of thick-layer mineral scratch overlay renders. It provides seamless insulation layers, which adapt to all geometric forms of the substrate.

Due to its low modulus of elasticity, a high de-coupling effect from the substrate is achieved and thus the risk of cracks due to the substrate is significantly reduced.

The low tension of the render allows the levelling of very uneven substrates and reduces the crack risk at a large extent in combination with a bonding and reinforcing mortar on top.

Thanks to its optimum properties (open to diffusion and capillary-active), it can generally be used for internal insulation purpose without any internal vapour-tight membrane in renovation areas.

For use outdoors and indoors.

Description

weber.therm 507 is a factory-mixed mineral dry mortar.

Composition

Cement, organic lightweight aggregates, hydrophobic agents, additives for better workability and adhesion to substrate.

Main features

- high yield
- low tension when hardening
- for mechanical and manual application
- particularly suitable as additional insulation of heat-insulating masonry
- for reliable rendering works on critical substrates

- excellently suited as interior thermal insulation in renovation areas
- high decoupling effect of the overlay render (top coat); hence low tendency to cracking
- for use outdoors and indoors

Technical values

Application thickness:	20 mm - 100 mm
Thermal conductivity (λ) (DIN 4108):	0.07 W/mK
Bulk density:	approx. 250 kg/m ³
Compressive strength (28 days):	≥ 0.4 N/mm ² (class CS I)
Coefficient of water absorption (w):	≤ 2 kg/m ² * \sqrt{h}
Water vapour diffusion resistance value (μ) (EN 1745):	≤ 15
Class of capillary water absorption (EN 1062-1):	W 1
Class of reaction to fire (EN 13501-1):	A2 - s1, d0 (non-combustible)

General notes

- Protect fresh render surfaces from rain to prevent efflorescence and from too rapid water evaporation, for ensuring an optimal hardening.
- Comply with the national guidelines and/or standards (for ex. DIN 18550); if not issued and if necessary, request technical advice.
- The consumption figures mentioned in this document refer to the minimum layer thickness of the render. Due to specific substrates and application variations the consumption might vary. Exact consumption must be determined on a job site mock-up (trial area).
- Adjacent building parts must be separated from the built-in render system.

Special notes

- **weber.therm 507** must be always covered with a reinforcement layer, whenever it is covered with a thin-layer mineral overlay render (see herebelow "Application of mineral overlay renders"). In case of thick-layer mineral scratch renders a reinforcement layer is not necessary.
- The light reflectance value (LRV) of the top coat (overlay render) should be ≥ 40 .
- Socket areas of facades must be covered with the perimetric insulation boards (**weber.therm EPS Sockel**) + bonding and reinforcing mortar **weber.therm 300** + woven mesh **weber.therm 310** + specific socket render + water-repellent paint. For full information request technical advice.

Substrate preparation

- The substrate must be clean, load-bearing and free of all adhesion-impairing substances.
- Remove dirt, dust and loose particles.
- Remove cement laitance (hard sinter skin) with a notched large trowel before applying further layers. Platz?
- When used indoors on old masonries, knock off damaged old plasters, scrape out brittle mortar in the joints and clean the whole wall surface.
- High-porosity substrates or substrates with different porosity: spray the bondcoat **weber.therm 500** in approx. 10 mm thickness
- Normal absorbent substrates (e.g lightweight perforated bricks): no pre-treatment is necessary.
- Low-porosity substrates (dense and smooth surfaces, e.g concrete, hard-burnt clinker, XPS or EPS boards): spray/apply the mineral bonding layer **weber.dur 101** in at least 5-mm thickness at a rate of approx. 6.0 kg/m² and comb horizontally with a notched trowel.
- Respect the drying time of the pre-said products – **weber.therm 500** (at least 1 day per cm thickness), **weber.dur 101** (at least 1 day per mm thickness) – prior to next applications
- Remove at least 70% of any existing old paint coats.
- The substrate evenness must comply with the allowed tolerances (variations) defined by the national standards and/or guidelines (for ex. DIN 18202 “Tolerances in Building Constructions”). If necessary, take the appropriate remedial measures for levelling the substrates; if in doubt, request technical advice.
- Check old renders carefully and remove all hollow or brittle parts. Clean old substrate and/or old render; if necessary, pre-wet. Repair the areas with a lightweight lime-cement render (for ex. **weber.dur 132**).
- Carry out tensile adhesion tests (pull-off tests) in case of critical substrates; if they are insufficiently load-bearing, use a galvanised, welded wire mesh, like Distanet, Welnet or similar and fix it with at least 8 dowels/m² to the substrate.
- For the flush and vertical alignment of connections and terminations fix the render profiles with the profile bonding and installation mortar **weber.mix 125**.
- The substrate preparation must be adapted to the specific job site conditions.

Working instructions

- Temperature of air, materials and substrate during application and drying: $\geq +5^{\circ}\text{C}$
- Do not add any foreign substances during mixing and application.

- Clean mixing equipment and tools with water (fresh product). Hardened material can only be removed mechanically.

Mixing

- Mechanical application: use a render machine with following equipment: special fan for insulating render - screw pump D 8 - 1.5 with tension clamp - material hopper - stripper - rotor blunger - fine spray machine 25 (nominal size) - spray nozzle F 14 mm - hoses with 25-mm diameter. We recommend the machine Putzmeister PFT G4. For full information request technical advice.
- Manual application: mix the bag content (75 liters) with approx. 12.5 liters of water until lump-free, using an electric drill and an appropriate stirrer.

Application

- Spray/apply **weber.therm 507** in the appropriate thickness (20 mm - 100 mm) in 1 or 2 layers and strike off with a stainless smoothing trowel.
- Max. thickness for single layer: 60 mm / total max. thickness in 2 layers: 100 mm
- Respect a delay of 1 - 3 days between 1st and 2nd layer.
- Rule level the 1st or the 2nd layer flush and perpendicular with a straight edge (for ex. aluminium beam), avoiding honeycombs or gaping holes.
- Remove cement laitance (hard sinter skin) with a notched large trowel on top of the render after hardening, prior to the next operations (application of a reinforcing mortar or a thick-layer mineral overlay render).
- Leave the surface of **weber.therm 507** as required for the specific post-applied product: either by roughening with a grid float in case of application of a reinforcement layer or by combing horizontally with a hard broom or a large notched trowel in case of direct application of a thick-layer mineral overlay render.

Application of thick-layer mineral overlay renders

- As a rule **weber.therm 507** can be covered directly with thick-layer mineral scratch overlay renders (**weber.top 200/203/204/206 AquaBalance**).
- Respect a drying time of 1 day/cm, at least 7 days prior to application of the scratch overlay renders

Application of reinforcement layer + thin-layer mineral overlay renders

- **weber.therm 507** is not allowed to be covered directly with thin-layer mineral overlay renders; in this case, a total overlay render shell of at least 10 mm thickness must be achieved.

- For this purpose **weber.therm 507** must be covered with a reinforcement layer (in a thickness of 6 mm - 7 mm), consisting of the bonding and reinforcing mortar **weber.therm 300** or **376** embedded in the woven mesh **weber.therm 310** (mesh size 8 x 8 mm).
- Respect a drying time of 1 day/cm, at least 7 days prior to application of the reinforcement layer.
- Depending on weather conditions and type of finish top coat, the final render layer of **weber.therm 507** can be pre-wetted (preferably the day before); alternatively, the universal primer **weber.prim 403** can be applied in case of thin-layer overlay renders.
- Following thin-layer mineral overlay renders can be used as finish top coats on top of the reinforcement layer: the floated renders **weber.star 220/221/223/240** and **261 AquaBalance** (cement-based) or the textured renders/plasters **weber.cal 286** or **288** (lime-based).
- Respect a drying time of at least 14 days prior to application of the thin-layer overlay renders.

Practical information

Application thickness:

20 mm - 100 mm

Water demand:

approx. 12.5 liters / 75 liter bag

Tools:

Render machine Putzmeister PFT G4 with special equipment, straight edge (for ex. aluminium beam), notched large trowel; for finishing works in case of scratch renders: hard broom or notched large trowel; in case of thin-layer renders: grid float

Storage:

The product can be stored up to 12 months in its original unopened packaging, if kept dry and protected from moisture.

Consumption / yield

20 mm thickness:	approx. 2.9 m ² / 75 liters
30 mm thickness:	approx. 1.9 m ² / 75 liters
40 mm thickness:	approx. 1.4 m ² / 75 liters
60 mm thickness:	approx. 1.0 m ² / 75 liters
80 mm thickness:	approx. 0.7 m ² / 75 liters
100 mm thickness:	approx. 0.6 m ² / 75 liters

Technical Data Sheet



Packagings

Type	Sales unit	Number / euro-pallet
Paper bag	75 liters	24 bags

The information in this technical data sheet is based on our current knowledge and experience at the time of printing. However, they do not guarantee in the legal sense.