

## weber.therm 301

### Bonding and reinforcing mortar

**Mineral bonding and reinforcing mortar within Etics weber.therm A 200, B 100 and AK 500/BK 500 - Renovation mortar for old load-bearing renders**

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#### Fields of application

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As thick-layer, mineral bonding and reinforcing mortar within the Etics (external thermal composite systems) **weber.therm A 200, B 100** and **AK 500/BK 500**.  
Also for use as renovation mortar for old load-bearing renders.  
For use outdoors and indoors.

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#### Description

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**weber.therm 301** is a factory-mixed, mineral dry mortar according to EN 998-1.

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#### Composition

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Cement, white hydrated lime, graded mineral aggregates, fibers, hydrophobing agents, additives for better workability and adhesion to substrate (underlay render).

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#### Main features

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- thick-layer, mineral bonding and reinforcing mortar
- provides a high-performance reinforcement layer in combination with **weber.therm** reinforcement fabrics
- high bonding strength
- excellent workability properties
- best suited for mechanical application
- for use as bonding and reinforcing mortar within Etics **weber.therm A 200, B 100** and **AK 500/BK 500**
- also for use on old load-bearing renders (outdoors and indoors)

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## Technical values

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Application thickness:	4 mm - 7 mm
Water absorption coefficient (w):	$< 0.5 \text{ kg/m}^2 \cdot \sqrt{\text{h}}$
Water vapour diffusion resistance value ( $\mu$ ):	$\leq 25$
Pull-off strength on substrate:	$> 0.3 \text{ N/mm}^2$
Class of capillary water absorption (EN 1062-1):	W 2
Yield:	approx. 780 liters/ton
Compressive strength (28 days):	$> 8 \text{ N/mm}^2$ (class CS IV – EN 998-1)
Class of reaction to fire (EN 13501-1):	A 1 (non-combustible)

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## Quality control

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**weber.therm 301** is subject to a regular quality control by external monitoring and self-monitoring according to EN 998-1.

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## General notes

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- Protect the fresh mortar from too quick 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 mortar. 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.
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## Special notes

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- For full information related to all application details, like assembly of boards, dowelling works, reinforcement of corners, assembly of profiles, socket parts etc., refer to the **Weber** installation instructions of the specific Etics and/or request technical advice.
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## Substrates

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- Allowed substrates for use as bonding and reinforcing mortar: masonry walls (new and old buildings).
  - Allowed substrates for use as reinforcing mortar: old load-bearing renders.
  - In case of low-grip and non-absorbent substrates (dense and smooth surfaces, e.g concrete, clinker), use the special cement-based bonding mortar **weber.therm 370**.
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## Substrate preparation

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- The substrate must be load-bearing, sufficiently dry, level, and free of all adhesion-impairing substances.
- Remove dirt, dust and loose particles.
- Knock off protruding concrete and mortar residues.
- Remove efflorescence and residues of formwork oil; if necessary, via steam-blasting.
- 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.
- Differences of  $\pm 10$  mm can be compensated during bonding ( $\pm 20$  mm for additionally dowelled system). Unevenness  $> 10$  mm (or  $> 20$  mm) must first be levelled out with **weber.therm 300** (bonding and reinforcing mortar), **therm 376** or **weber.dur 132** (lightweight renders).
- Respect the drying time of the pre-said products (at least 7 days) before bonding insulation boards.
- The contractor should report concerns in case of heavy contamination, efflorescence, excessively smooth surfaces, greater unevenness than allowed and too high building moisture (e.g as a result of moisture-donating finishing works).
- 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**.
- Remove at least 70% of any existing old paint coats.
- If the organic paint or render is load-bearing, the insulation boards can be applied after the facade cleaning.
- If the coating is not load-bearing, it must be opened in a checkerboard pattern and removed by steam- or sandblasting by at least 70%.
- Carry out tensile adhesion tests (pull-off tests) in case of critical substrates.
- Expansion joints of the building structure must be taken over in the whole construction of the system. In all cases expansion joints should be arranged every 30 meters. Follow the national norms /standards; if necessary, refer to the norm DIN 18 540 “Sealing of External Wall Joints with Joint Sealants”.
- 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.

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## Working instructions

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- 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: the mortar can be applied with all conventional render machines (with mixing, conveying and spraying equipment). For full information request technical advice.
- Manual application: mix the bag content (30 kg) with approx. 7.5 liters of water until lump free, using an electric drill and an appropriate stirrer.

## Application as bonding mortar for insulation boards

- Spray/apply **weber.therm 301** in a frame shape all around the insulation boards **weber.therm** (specific for each Etics) and in 2 - 3 vertical strips on their backside.
- A special glue gun (for ex. PFT or Putzmeister) can also be used to apply the bonding mortar onto the insulation boards.
- In case of sufficiently even substrates and in case of use of the insulation boards **weber.therm Facade speedy** and **weber.therm Facade express** the mortar can be sprayed/applied in beads on the substrate (coverage of at least 50%).
- Alternatively, the insulation boards can also be covered full-surface on their backside and pressed on the walls.
- Position the boards directly without delay (within max. 10 minutes), press them on and float them in using horizontal movements.
- As a rule, a contact between substrate and boards of at least 50% must be obtained after their final settlement.

## Application as reinforcing mortar over insulation boards

- After a drying time of at least 3 days works for the reinforcement layer and the dowelling can begin.
- Spray/apply **weber.therm 301** in 4 - 7 mm thickness onto the insulation boards and strike off with a stainless smoothing trowel.
- Rule level with a straight edge (for ex. aluminium beam), avoiding honeycombs or gaping holes.

- Lay the woven mesh **weber.therm 310** (mesh size 8 x 8 mm) "wet-in-wet" in vertical or horizontal directions wrinkle-free strips across the whole surface. The strips must overlap by at least 10 cm. Gently press the mesh with a flat trowel. The mesh must lie in the upper half of the mortar layer.
- As a rule, the embedding of a diagonal reinforcement with the glass fibre mesh **weber.therm 315** (40 cm long - 33 cm wide) is recommended for building openings (for ex. doors, windows).
- Leave the surface of **weber.therm 301** as required for the specific overlay render (finish top coat) to ensure best key (see hereunder).

## Application of overlay renders on **weber.therm 301**

- Respect a drying time of at least 7 days prior to application of overlay renders.
- All **Weber** mineral and organic overlay renders can be used as finish top coats on top of **weber.therm 301**; the final choice of the overlay render depends on the specific system.
- Depending on weather conditions and type of finish top coat, the reinforcement layer 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.
- In case of thick-layer overlay renders (scratch renders **weber.top**) comb **weber.therm 301**, using a hard broom or a notched large trowel.
- In case of thin-layer mineral (range **weber.star**) or organic overlay renders (range **weber.pas**) rule level **weber.therm 301** to a flat and in-plane surface with a wooden float (do not smooth it).

## Application on old load-bearing overlay renders

- Clean and prepare the old renders (see above).
- Spray/apply **weber.therm 301** up to max. 10 mm thickness.
- Rule level with a straight edge (for ex. aluminium beam), avoiding honeycombs or gaping holes.
- In case of cracks in the old substrate lay the woven mesh **weber.therm 310**. Follow the instructions relating to its application as described above.
- After at least 7 days apply the new mineral or organic overlay render as finish top coats.
- In case of thick-layer overlay renders comb **weber.therm 301**, using a hard broom or a notched large trowel.
- In case of thin-layer mineral or organic overlay renders rule level **weber.therm 301** to a flat and in-plane surface with a wooden float (do not smooth it).

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## Practical information

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Application thickness:

4 mm - 7 mm

Water demand:

approx. 7.5 liters / 30 kg

Tools:

Render machine or electric drill + stirrer, glue gun, straight edge (for ex. aluminium beam), flat trowel; for finishing works in case of scratch renders: hard broom or notched large trowel; in case of other renders: wooden float.

Storage:

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

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## Consumption / yield

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Bonding mortar:	approx. 5.0 kg/m <sup>2</sup>	approx. 6.0 m <sup>2</sup> / 30 kg
Reinforcing mortar:	approx. 7.0 kg/m <sup>2</sup>	approx. 4.3 m <sup>2</sup> / 30 kg
Bonding and reinforcing mortar:	approx. 12.0 kg/m <sup>2</sup>	approx. 2.5 m <sup>2</sup> / 30 kg

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## Packagings

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Type	Sales unit	Number / euro-pallet
Paper bag	30 kg	42 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.*