

weber.therm plus ultra

Bonding and reinforcing mortar

Bonding and reinforcing mortar for Etics weber.therm plus ultra

Fields of application

As thick-layer, mineral bonding and reinforcing mortar within the high-performance Etics (external thermal insulation composite system) **weber.therm plus ultra**.

The system consists of the phenolic insulation board **weber.therm RS 021 plus ultra** and a mineral overlay render (EN 998-1) or organic overlay render (EN 15824).

Particularly suitable for the facade insulation of buildings where a slim system structure is required. Also used for the thermal insulation improvement of old and new facade walls and/or soffits. Furthermore, convenient for the renovation of damaged and cracked new and old facades. For use outdoors.

Description

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

Composition

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

Main features

- thick-layer and stable reinforcement layer
- provides a high-performance reinforcement layer in combination with **weber.therm** reinforcement fabrics
- optimal tension distribution
- high bonding strength
- excellent workability
- best suited for mechanical application
- for use as bonding and reinforcing mortar within high-performance Etics **weber.therm plus ultra**
- particularly dedicated for high-performance insulation boards

- also for use onto old load-bearing renders
- for use outdoors

Technical values

Application thickness:	5 mm - 8 mm
Water absorption coefficient (w):	$< 0.5 \text{ kg/m}^2 \cdot \sqrt{h}$
Water vapour diffusion resistance value (μ):	≤ 25
Class of capillary water absorption (EN 1062-1):	W 2
Yield:	approx. 750 liters/ton
Solid mortar density:	approx. 1.500 kg/m ³
Compressive strength (28 days):	$> 8 \text{ N/mm}^2$ (class CS IV – EN 998-1)
Pull-off strength on substrate:	$\geq 0.08 \text{ N/mm}^2$
Class of reaction to fire (EN 13501-1):	A 1 (non-combustible)

Quality control

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

General notes

- 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.
 - Protect the fresh mortar from too quick water evaporation, for ensuring an optimal hardening.
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Special notes

- **Limits of use:** do not use **weber.therm plus ultra** for bonding insulation boards on low-grip and non-absorbent substrates (dense and smooth surfaces, e.g concrete and clinker); in this case we recommend the special cement-based bonding mortar **weber.therm 370**.
- Allowed substrates: concrete and masonry
- For full information related to all application details, like assembly of boards, dowelling works, reinforcement of corners, assembly of profiles, socket parts etc. request technical advice.

Substrate preparation

- The substrate must be load-bearing, sufficiently dry and level.
- Knock off protruding concrete and mortar residues.
- Remove efflorescence and residues of formwork oil; if necessary, by mechanical means.
- 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 ± 10 mm can be compensated during bonding (± 20 mm for additionally doweled 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**.
- If the old organic paint or render is load-bearing, the facade surface insulation boards can be applied after the facade cleaning.
- If they are not load-bearing, the old surface must be opened in a checkerboard pattern and at least 70% removed by steam- or sandblasting.
- Carry out tensile adhesion strength tests (pull-off tests) on 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 not issued and if necessary, refer to the norm DIN 18 540 “Sealing of External Wall Joints with Joint Sealants”.
- For the correct 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: 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. 8 liters of water until lump free, using an electric drill and an appropriate stirrer.

Application as bonding mortar for insulation boards

- Bonding of the phenolic insulation boards **weber.therm RS 021 Facade plus ultra** (facade boards) and **weber.therm RS 021 Leibung plus ultra** (soffit boards) is carried out with **weber.therm plus ultra**.
- Spray/apply **weber.therm plus ultra** in a frame shape all around the insulation boards and in 3 vertical strips on their backside.
- A special glue gun (for ex. PFT or Putzmeister) can also be used for bonding the insulation boards.
- As a rule, a contact between substrate and boards of at least 60% must be obtained after their final settlement.
- Position the boards directly without delay (within max. 10 minutes), press them on and float them in using horizontal movements.

Application as reinforcing mortar over the insulation boards

- Respect a drying time of at least 3 days before works for the reinforcement layer and the dowelling can begin.
- Spray/apply **weber.therm plus ultra** in a thickness of 5 mm - 8 mm onto the insulation boards and rule level with a stainless smoothing trowel.
- Lay the woven mesh **weber.therm 310** (mesh size 8 x 8 mm) or **311** (mesh size 4 x 4 mm) "wet-in-wet" in vertical or horizontal wrinkle-free strips across the whole surface. The strips must overlap by 10 cm. Gently press the strips 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 plus ultra** as required for the specific overlay render (finish top coat) to ensure best key (see hereunder).

- All **Weber** mineral and organic overlay renders can be used as finish top coats on top of the reinforcement layer **weber.therm plus ultra** + woven mesh.
- Respect a drying time of at least 7 days prior to application of the overlay render.
- Depending on the weather conditions and the type of finish top coat, pre-wet the reinforcement layer (preferably the day before). Alternatively, apply the universal primer **weber.prim 403** in case of thin-layer overlay renders.
- In case of thick-layer mineral overlay renders (scratch renders **weber.top**), comb **weber.therm plus ultra**, using a hard broom or a notched large trowel.
- In case of thin-layer mineral overlay renders (range **weber.star**) or organic renders (range **weber.pas**), rule level **weber.therm plus ultra** 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 plus ultra** 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** or **311**. Follow the instructions relating to its application as described above.
- Leave the surface of **weber.therm plus ultra** in accordance with the type of overlay render (finish top coat) to ensure best key (see above).
- After at least 7 days apply the new mineral or organic overlay render as finish top coat.
- Proceed as described above for the application of the specific render.

Practical information

Colours:

natural white and grey

Application thickness:

5 mm - 8 mm

Water demand:

approx. 8 liters / 30 kg

Tools:

Render machine or electric drill + stirrer, glue gun, stirrer, stainless steel smoothing trowel; for finishing works in case of scratch renders: hard broom or notched large trowel; in case of floated renders: wooden float.

Storage:

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

Technical Data Sheet



Consumption / yield

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

Packagings

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.