Technical data sheet

Gutex Ultratherm

Gutex Ultratherm is the sub-roof panel with unique rain protection thanks to its patented tongue and groove profiling – with high insulation value.

Ingredients

- Untreated fir and spruce wood
- 4,0 % PUR resin (polyurethane resin)
- 0,75 % Paraffine

Waste disposal

- Waste code numbers according to AVV: 030105, 170201

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Bulk density ρ [kg/m³]	~ 180
Nominal thermal conductivity λ_D [W/mK]	0,042
Vapour diffusion μ	3
Compressive stress/strength [kPa]	≥ 150
Tensile strength perpendicular to the panel plane [kPa]	≥ 20
Short-term water absorption [kg/m²]	≤ 1
Air flow resistivity [kPa s/m²]	≥ 100
Specific heat capacity [J/kgK]	2.100
Maximum working temperature [°C]	110
Fire reaction Euro Class as per EN 13501-1	E
Product standard	EN 13171:2012+A1:2015
Plate type according to EN 622-4	SB.E
Board designation	WF-EN13171-T5-WS1,0-CS(10/Y)150-TR20-MU3-AFr100

CE 04 036-03.312 natureplus PEFC PEFC/04-34-0006

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Product details

Joint type	tongue + groove					
Thickness [mm]	60	80	100	120	140	160
Length × width [mm × mm]	1900 x 600					
Cover dimensions: length × width [mm × mm]	1869 x 569					
Coverage: square metres per panel [m²]	1,06					
m² per unit	1,14					
Weight per board [kg]	11,45	15,26	19,08	22,9	26,71	30,53
Weight per m² [kg]	10,80	14,40	18,00	21,60	25,20	28,80
Items per pallet	36	26	20	18	14	12
Square metres per pallet [m²]	41,04	29,64	22,80	20,52	15,96	13,68
Weight per pallet [kg]	460	450	430	460	420	410
Nominal thermal resistance R_D [m²K/W]	1,40	1,90	2,35	2,85	3,30	3,80
sd value [m]	0,18	0,24	0,30	0,36	0,42	0,48

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Areas of application

- Additional insulation in old and new buildings
- For exterior cladding on stud frame constructions (ventilated facades)

Advantages

- Time-saving and easy installation thanks to high dimensional accuracy
- Single-layer and homogeneous bulk density profile
- Hail resistance (TÜV Rheinland confirms highest hail protection class HW5)
- Windproof
- Rainproof from a roof pitch of 15° without additional covering or taping of the panel joints
- Can be exposed to the weather for 3 months as a temporary roof
- Weathering test extendable up to 6 months
- No nail sealing strips or nail seals required
- Additional thermal insulation
- Minimisation of thermal bridges
- Excellent heat storage capacity → protection against summer heat and winter cold
- Improvement of sound insulation
- Moisture regulating
- Diffusion-open
- Guarantee deposit with the Central Association of German Roofers
- Wood is a sustainable raw material → recyclable
- Made in Germany (Black Forest)
- Biologically safe (natureplus® certified)
- Practical: Combination of different thicknesses within the entire thickness range possible, e.g. for over-insulating roof overhangs

Processing instructions

- Store and install panels in a dry environment
- Install panels with the labeled side facing out
- Rafter spacing
- Rafter spacing requirements:
  - For panels 60 mm thick, the maximum rafter spacing is 110 cm.
  - For panels between 80 mm and 160 mm thick, the maximum rafter spacing is 125 cm.
- Install panels horizontally, ensuring a precise fit and watertight joints
- Spaces between rafters are not accessible
- Secure immediately with counter-battens
- No nail sealing tape or nail seals required
- Cross joints are not permitted
- Damaged panels must not be installed
- Panels are generally installed perpendicular to the rafters
- Offset joints from row to row by 1 rafter span, but at least 40 cm
- Connections and penetrations must be taped rainproof using the Gutex adhesive system
- Install with the tongue facing upward
- The panel cannot be used as a structural support
- Gutex Ultratherm is not a load-bearing component (e.g., snow loads)
- Increased moisture exposure on the interior side must be avoided
- Runoff rainwater can contaminate adjacent components, particularly during the construction phase, due to fiber abrasion or other contaminants. Ensure proper water drainage
- Gutex wood fiber insulation boards can be exposed to temperatures of up to 100 °C even for extended periods. If higher temperatures are expected, such as with solar piping, additional measures must be taken

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- The required minimum clearances between combustible building materials and chimneys, etc., are specified in the applicable fire safety regulations and must be observed
- Legal requirements regarding the handling of wood dust must be observed

Please note the following excerpt from the ZVDH guidelines regarding installation based on the roof pitch:

- For roof pitches of less than 15°, covering with a suitable membrane is mandatory.
- For roof pitches of 15° or more, bonding of the panel joints is not necessary, provided that the pitch does not fall below the standard roof pitch by more than 8° and/or there are no increased requirements in accordance with the ZVDH regulations.

If there are deviations from the specifications listed above, the "Technical Rules for Roofing with Roof Tiles and Roof Stones" from the ZVDH regulations must be followed

- If the roof pitch (RDN*) of the roof covering with roof tiles and roof stones falls below 8°, measures to reinforce the support battens are required, e.g., support battens made of moisture-resistant materials, water-repellent coverings for the support battens, or similar
- Increased requirements arise from
  - long rafter lengths >10 m
  - concentrated water flow on specific areas of the roof, e.g., below downspouts or at the junctions of valleys, etc.
  - special roof surfaces such as curved dormers, barrel roofs, and conical roofs
  - snow-prone areas (snow load ≥ 1.5 kN/m²)
  - windy areas (Wind Load Zone 4) or ridge and peak locations, or areas prone to wind tunnels

* The standard roof pitch depends on the tile shape and laying method. It is specified by the tile manufacturer. ZVDH regulations as of 04/2024

Hot-Air Welding – Installation Guidelines

- Do not apply a direct flame; use hot air only (hot-air gun)
- Set hair dryer temperature < 350°
- The hot air gun must not be held in one spot for longer than 7–10 seconds
- If discoloration is detected on the surface of the wood fiber insulation board, the area must be inspected and, if necessary, removed

These installation guidelines protect Gutex panels (excluding Gutex Thermoflex and Gutex Thermofibre) from spontaneous combustion; the installation guidelines for the sheets must also be followed.

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Fastening

Can be fastened with staples or nails up to 60 mm thick. For more information, please contact ITW Befestigungssysteme GmbH. Fasteners must be at least galvanized. Gutex Ultratherm can also be fastened with approved screws. The forms "Design of On-Roof/On-Rafter Insulation" can be found at www.gutex.co.uk/knowledge-service/processing-wood-fibre-insulation/planning-design

The fastening must not be carried out in the area of the recess formed by the patented tongue-and-groove profiling.

Detailed designs

You can easily find all detailed instructions on our product page under the "Application" menu item.