

# Technical data sheet

## Gutex Ultratherm



Gutex Ultratherm is the sarking board with unique rain protection thanks to its patented tongue and groove profiling – with a high insulation value.

### Ingredients

- Untreated fir and spruce
- 4.0 % PUR resin
- 0.75 % paraffin

<b>Bulk density <math>\rho</math> [kg/m<sup>3</sup>]</b>	~ 180
<b>Nominal thermal conductivity <math>\lambda_D</math> [W/mK]</b>	0.042
<b>Vapour diffusion <math>\mu</math></b>	3
<b>Compressive stress/strength [kPa]</b>	$\geq 150$
<b>Tensile strength perpendicular to the surface [kPa]</b>	$\geq 20$
<b>Short-term water absorption [kg/m<sup>2</sup>]</b>	$\leq 1$
<b>Air flow resistivity [kPa s/m<sup>2</sup>]</b>	$\geq 100$
<b>Specific heat capacity [J/kgK]</b>	2100
<b>Maximum working temperature [°C]</b>	110
<b>Fire reaction Euro Class as per EN 13501-1</b>	E
<b>Product standard</b>	EN 13171
<b>Board type as per EN 622-4</b>	SB.E
<b>Board designation</b>	WF-EN 13171-T5-VVS1,0-CS(10/Y)150-TR20-MU3-AF <sub>r</sub> 100

### Disposal

- Waste code numbers as per AVV 030105, 170201



036-03.307

# Technical data sheet

## Gutex Ultratherm

Joint type	Tongue and groove		
Thickness [mm]	60	80	100
Length x width [mm x mm]	1780 x 600		
Actual coverage: Length x width [mm x mm]	1749 x 569		
Actual coverage: Square metres per board [m <sup>2</sup> ]	1.00		
m <sup>2</sup> /Piece(s)	1.07		
Weight per board [kg]	11.50	15.40	19.20
Weight per m <sup>2</sup> [kg]	10.80	14.40	18.00
Piece(s)/Pallet	36	26	20
Square metres per pallet [m <sup>2</sup> ]	38.45	27.77	21.36
Weight per pallet [kg]	490	430	390
Nominal thermal resistance R <sub>D</sub> [m <sup>2</sup> K/W]	1.40	1.90	2.35
sd value [m]	0.18	0.24	0.30

Joint type	Tongue and groove		
Thickness [mm]	120	140	160
Length x width [mm x mm]	1780 x 600		
Actual coverage: Length x width [mm x mm]	1749 x 569		
Actual coverage: Square metres per board [m <sup>2</sup> ]	1.00		
m <sup>2</sup> /Piece(s)	1.07		
Weight per board [kg]	23.10	26.90	30.80
Weight per m <sup>2</sup> [kg]	21.60	25.20	28.80
Piece(s)/Pallet	18	14	12
Square metres per pallet [m <sup>2</sup> ]	19.22	14.95	12.82
Weight per pallet [kg]	420	390	
Nominal thermal resistance R <sub>D</sub> [m <sup>2</sup> K/W]	2.85	3.30	3.80
sd value [m]	0.36	0.42	0.48



# Product information

## Gutex Ultratherm

### Areas of use

- Additional insulation in old and new buildings
- As rainproof sarking
- For external boarding on stud frame constructions (rainscreen facades)
- UDP-A according to ZVDH regulations
- As per the associations' leaflet

### Advantages

- High dimensional accuracy for time-saving and simple installation
- Single-layer, homogeneous bulk density profile
- Hail resistance (TÜV Rheinland confirms highest hail protection class HW5)
- Windproof
- Rainproof from 15° roof pitch without additional covering or taping of the board joints
- Can be exposed to the elements for 3 months as a temporary roof
- No nail sealing tapes or nail seals necessary
- Additional thermal insulation
- Minimisation of thermal bridges
- Outstanding heat storage capacity → impressive summer heat protection
- Improvement of sound insulation
- Moisture-regulating
- Vapour-permeable
- Guarantee deposited with the Central Association of the German Roofing Trade
- Wood as the sustainable raw material → recyclable
- Manufactured in the direct vicinity of Switzerland (Waldshut, Black Forest)
- Ecologically safe (natureplus® certified)
- Practical: Combination of different thicknesses within the entire thickness range possible, e.g. when over-insulating the eaves

### Installation instructions

- Store and work with the boards in a dry place
- Install the boards with the labelled side facing outwards
- Adhere to rafter unit spacing:

Panel thickness in mm	Maximum rafter axial dimension in cm
60	110
80/100/120/140/160	125

- Install the boards horizontally; they must fit accurately and be joint-tight
- Gaps between rafters are not accessible
- Fasten immediately with counterlathing
- No nail sealing tapes or nail seals necessary
- Cross joints are not permitted
- Do not install damaged boards

- The boards are generally installed at right angles to the rafters
- Joint offset from row to row by at least 1 rafter unit spacing, but at least 40 cm
- Joints and penetrations must be taped rainproof with the Gutex adhesive system
- Install with rising tongues
- The board cannot be statically supported
- Gutex Ultratherm is not a load-bearing component (e.g. snow loads)
- Increased levels of moisture inside must be avoided
- Rainwater run-off, especially during the construction phase, can contaminate adjacent building components through fibre abrasion or other impurities. Ensure appropriate water drainage.
- Gutex wood fibre insulation boards can be exposed to temperatures of up to 100 °C, even over a longer period of time. If higher temperatures are to be expected, e.g. with solar pipes, additional steps must be taken.
- The required minimum clearances from combustible building materials to chimneys etc. are specified in the relevant fire protection regulations and must be adhered to.
- Note the legal requirements for handling wood dust

Note for the following roof pitches

< 15°	cover with suitable membrane
≥ 15°	no bonding of board joints necessary, provided the standard roof pitch is not undercut by more than 8°.

## Hot air welding – guidelines

- No direct flame application; hot air only (hot air device)
- Set hot air blower temperature < 350°
- The hot air device must not be left in one place for longer than 7-10 sec
- If discolouration is seen on the surface of the wood fibre insulation board, the area must be checked and, if necessary, removed

These guidelines protect Gutex boards (not including Gutex Thermoflex or Gutex Thermofibre) from spontaneous combustion; the guidelines for the membranes must also be followed.

## Fastening tables when using sarking

The fasteners used must be galvanised at minimum.

For deviating designs, the 'Screw dimensioning' form can be found at [www.gutex.de/service/bemessung-verbindungsmitte](http://www.gutex.de/service/bemessung-verbindungsmitte)

Gutex Ultratherm ≤ 60 mm and building height ≤ 10m inland						
Rafter unit spacing ≤ 85 cm Counterlathing 60 × 40			Spacing for Paslode 4.2 × 160 grooved RoundDrive® in cm			Spacing for haubold or Paslode 4.6 × 160 smooth (bare or galvanised) in cm
Roofing load kN/m <sup>2</sup>	Snow kN/m <sup>2</sup>	Wind zone	Roof pitch			Roof pitch
			15°	30°	45°	15°
0,30	≤ 0,85	Wz 1	70	40	45	45
		Wz 2	50	40	45	35
		Wz 3	35	35	35	25
		Wz 4	25	25	25	20
0,60	≤ 0,85	Wz 1	60	30	30	55
		Wz 2	55	30	30	40
		Wz 3	40	30	30	25
		Wz 4	30	25	25	20
0,95	≤ 0,85	Wz 1	45	25	15	45
		Wz 2	45	25	15	45
		Wz 3	45	25	15	30
		Wz 4	30	25	15	20

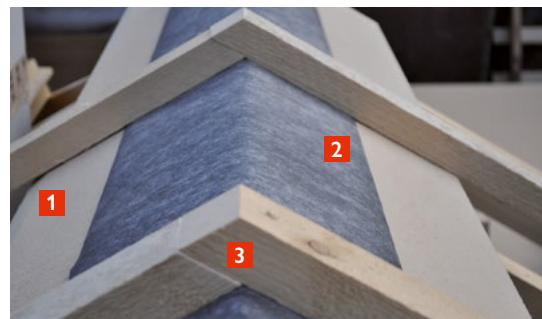
Source: ITW: we cannot guarantee the accuracy of the information in the tables.

## Details



Penetration joint

- 1 Gutex Ultratherm
- 2 Gutex adhesive system
- 3 Gutex caulking



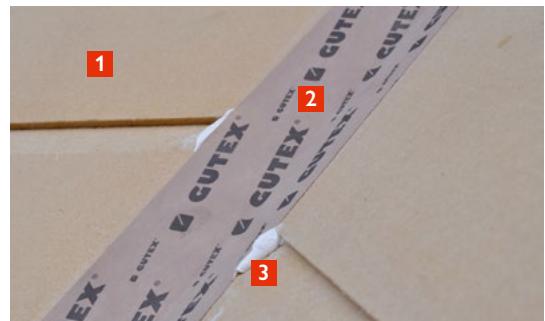
Ridge

- 1 Gutex Ultratherm
- 2 Sarking
- 3 Counterlathing



## Verge

- 1** Gutex Ultratherm
- 2** Gutex caulking
- 3** Sarking
- 4** Counterlathing



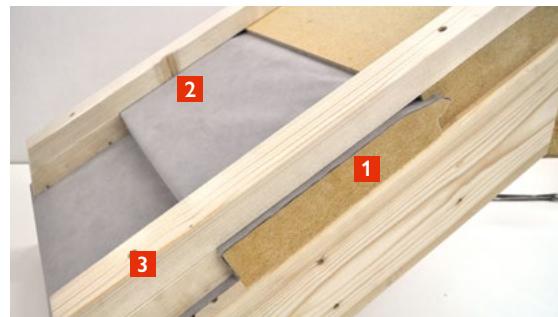
## Valley

- 1** Gutex Ultratherm
- 2** Gutex adhesive system
- 3** Gutex caulking



## Eaves 1. Variant

- 1** Canopy formwork
- 2** Gutex Ultratherm
- 3** Sarking
- 4** Rafter



## Eaves 2. Variant

- 1** Gutex Ultratherm
- 2** Sarking
- 3** Counterlathing (doubled)



For over 20 years, Ecological Building Systems has been at the forefront of environmental and sustainable building products supplying a range of innovative airtightness solutions and natural insulations backed up with expert technical support.

**As product suppliers in the UK and Ireland, we're happy to assist you with your projects and have expert technical and sales advice on hand.**



**Call us**

**Great Britain** +44 (0)1228 711511

**Ireland** +353 46 9432104



**Email us**

[info@ecologicalbuildingsystems.com](mailto:info@ecologicalbuildingsystems.com)



**Find us**

**Great Britain** Ecological Building Systems UK Ltd.,  
Cardewlees, Carlisle, Cumbria, CA5 6LF,  
United Kingdom

**Ireland** Ecological Building Systems Ltd.,  
Main Street, Athboy. Co. Meath, C15 Y678,  
Republic of Ireland