

# Technical data sheet

## Gutex Thermowall 5in1

Gutex Thermowall 5in1 is the universal insulation board for five areas of application.

### Ingredients

- Untreated fir and spruce wood
- 4.0 % PUR resin (polyurethane resin)
- 1.50 % Paraffin wax

### Waste disposal

- Waste code numbers according to AVV: 030105, 170201



### Technical data

<b>Bulk density <math>\rho</math> [kg/m<sup>3</sup>]</b>	~ 150
<b>Nominal thermal conductivity <math>\lambda_D</math> [W/mK]</b>	0.040
<b>Vapour diffusion <math>\mu</math></b>	4
<b>Compressive stress/strength [kPa]</b>	$\geq 100$
<b>Tensile strength perpendicular to the panel plane [kPa]</b>	$\geq 10$
<b>Short-term water absorption [kg/m<sup>2</sup>]</b>	$\leq 1$
<b>Air flow resistivity [kPa s/m<sup>2</sup>]</b>	$\geq 60$
<b>Specific heat capacity [J/kgK]</b>	2,100
<b>Maximum working temperature [°C]</b>	110
<b>Fire reaction Euro Class as per EN 13501-1</b>	E
<b>Product standard</b>	EN 13171:2012+A1:2015
<b>Plate type according to EN 622-4</b>	SB.E
<b>Board designation</b>	WF-EN13171-T5-WS1,0-DS(70,-)3-CS(10/Y)100-TR10-MU4-AFr60

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Joint type	Tongue and groove					
	40	60		80		100
<b>Thickness [mm]</b>	40	60		80		100
<b>Length × width [mm × mm]</b>	1900 × 600		2550 × 600	1900 × 600	2550 × 600	1900 × 600
<b>Cover dimensions: length × width [mm × mm]</b>	1880 × 580		2530 × 580	1880 × 580	2530 × 580	1880 × 580
<b>Coverage: square metres per panel [m<sup>2</sup>]</b>	1.09		1.47	1.09	1.47	1.09
<b>m<sup>2</sup>/Piece(s)</b>	1.14		1.53	1.14	1.53	1.14
<b>Weight per board [kg]</b>	6.54	9.81	13.23	13.08	17.64	16.35
<b>Weight per m<sup>2</sup> [kg]</b>	6.00	9.00		12.00		15.00
<b>Items per pallet</b>	54	36		26		20
<b>Square metres per pallet [m<sup>2</sup>]</b>	61.56	41.04	55.08	29.64	39.78	22.80
<b>Weight per pallet [kg]</b>	390		520	380	500	360
<b>Nominal thermal resistance R<sub>D</sub> [m<sup>2</sup>K/W]</b>	1.00	1.50		2.00		2.50
<b>sd value [m]</b>	0.16	0.24		0.32		0.40

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Joint type	Tongue and groove					
Thickness [mm]	100	120	140	160	180	200
Length × width [mm × mm]	2550 × 600	1900 × 600				
Cover dimensions: length × width [mm × mm]	2530 × 580	1880 × 580				
Coverage: square metres per panel [m <sup>2</sup> ]	1.47	1.09				
m <sup>2</sup> /Piece(s)	1.53	1.14				
Weight per board [kg]	22.05	19.62	22.89	26.16	29.43	32.7
Weight per m <sup>2</sup> [kg]	15.00	18.00	21.00	24.00	27.00	30.00
Items per pallet	20	18	14	12		10
Square metres per pallet [m <sup>2</sup> ]	30.60	20.52	15.96	13.68		11.40
Weight per pallet [kg]	480	390	360	350	390	360
Nominal thermal resistance R <sub>D</sub> [m <sup>2</sup> K/W]	2.50	3.00	3.50	4.00	4.50	5.00
sd value [m]	0.40	0.48	0.56	0.64	0.72	0.80

Joint type	Flush-mount					
Thickness [mm]	60			80		
Length × width [mm × mm]	3000 × 1250	3000 × 2500		6000 × 2500	3000 × 2500	
Cover dimensions: length × width [mm × mm]	3000 × 1250	3000 × 2500		6000 × 2500	3000 × 2500	
Coverage: square metres per panel [m <sup>2</sup> ]	3.75	7.5		15	7.5	
m <sup>2</sup> /Piece(s)	3.75	7.5		15	7.5	
Weight per board [kg]	33.75	67.5		135	90	
Weight per m <sup>2</sup> [kg]	9.00			12.00		
Items per pallet	15		10		12	8
Square metres per pallet [m <sup>2</sup> ]	56.25	112.50	75.00	150.00	90.00	60.00
Weight per pallet [kg]	530	1,100	762	1,500	898	626
Nominal thermal resistance R <sub>D</sub> [m <sup>2</sup> K/W]	1.50			2.00		
sd value [m]	0.24			0.32		

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### Areas of application

- Plasterable insulation board for Thermowall ETICS on timber frame constructions and solid timber elements without rear ventilation, from 60 mm thickness
- For exterior cladding directly on wooden frame constructions and on solid wood elements behind the facing shell in rear-ventilated facades
- As rainproof underlay (UDP-A) from 60 mm thickness
- Full-surface insulation layer for installation level

### Advantages

- Only 1 product for 5 areas of application
- Lower storage costs
- Simpler workflows, resulting in higher productivity and time savings
- Blow-in insulation suitable for panel thicknesses from 60 mm
- Wood is a sustainable raw material → recyclable
- Made in Germany (Black Forest)
- Biologically safe (natureplus® certified)

### Processing instructions

#### General

- Lay the boards with the labelled side facing outwards.
- Lay the boards horizontally, ensuring a precise fit and tight joints.
- All butt joints between boards must be backed up. Cross joints at panel joints are permitted if
  - the wall elements are connected in a force-fitting and form-fitting manner (tension, compression and shear resistant) or, in the case of roof elements, are immediately secured with counter battens.
  - Fastening devices for securing the dam boards are placed sufficiently close to the respective board edge.
- Damaged boards must not be laid.
- Boards cannot be used for structural purposes. Gutex Thermowall 5in1 is not a load-bearing component (e.g. snow loads).
- Increased moisture loads on the room side must be avoided.
- Rainwater runoff can contaminate adjacent components, especially during the construction phase, due to fibre abrasion or other contaminants. Appropriate water drainage must be ensured.
- Gutex wood fibre insulation boards can be exposed to temperatures of up to 110°C for extended periods of time. If higher temperatures are to be expected, e.g. in the case of solar pipes, additional measures must be taken.
- The minimum distances required between combustible building materials and chimneys, etc. are specified in the relevant fire regulations and must be observed.
- Dust extraction in accordance with BG regulations, observe the provisions of TR GS 553.
- Can be used in conjunction with Gutex Thermofibre blow-in insulation. For more information, visit Gutex informs you: Media & downloads for your wood fibre insulation

#### Installation Level

- Apply a single layer of fermacell GF 12.5 mm interior panelling over the entire surface without leaving any gaps (recommendation: horizontal installation). Use the pistol cut around the windows.

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- Fermacell GF must be fastened with staples to a structurally sound substrate:
  - On wood-based panel  $d \geq 15$  mm + Gutex Thermowall 5in1 + fermacell GF  $d = 12.5$  mm, staple: 2.0 x 85 mm (back width 27 mm)
  - On wood-based panels  $d \geq 20$  mm + Gutex Thermowall 5in1 + fermacell GF  $d = 12.5$  mm, staples: 2.0 x 90 mm (back width 27 mm)
- Vertical staple spacing  $\leq 150$  mm
- Horizontal staple spacing  $\leq 400$  mm (at the edge of the board  $\leq 200$  mm)
- Edge distance of the staples to the edge of the board  $\geq 25$  mm
- Drive in the staples so that they are at least flush with the surface and no more than 1 mm countersunk.
- Staples that are not sufficiently countersunk must be removed and replaced. Do not countersink them retrospectively.
- Formation of panel joints: adhesive joint in accordance with fermacell processing guidelines.

### Curtain-type rear-ventilated façade

- Maximum centre distance 83.3 cm
- Connections and penetrations must be permanently sealed with the Gutex adhesive system to ensure they are windproof and rainproof.
- 4 months of exposure to the elements
- Fix immediately with rear ventilation battens
- Offset of at least 30 cm

### Plasterable insulation board inside

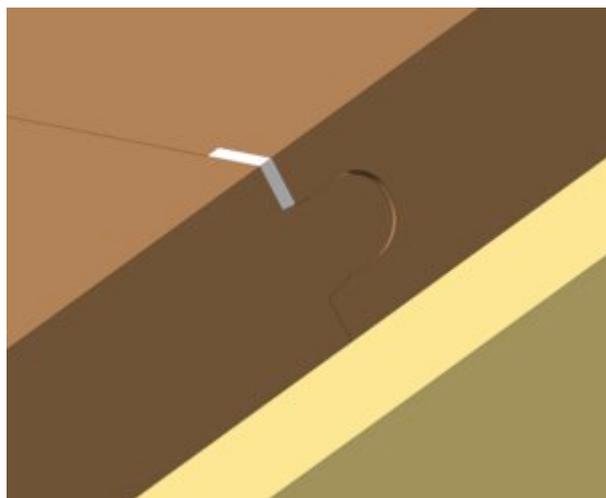
For full, detailed instructions on board installation, fastenings, and render application, see the GUTEX brochure 'Intevio - installation instructions'

### Roof

- Maximum center-to-center distance 90 cm, from 60 mm board thickness Roof joint offset by at least 1 rafter center distance
  - Rafter gaps are not accessible
  - No nail sealing tape or nail sealants are required for penetrations through the wood fiberboard
  - Joints and penetrations must be sealed with the Gutex Adhesive System to ensure they are rainproof
  - At butt joints, penetrations, or at the edge of the eaves, the profile must be sealed on the sides (see illustration below)
  - Temporary roof weatherproof for 4 weeks
  - All joints  $> 0.5$  mm must be reinforced with the Gutex Adhesive System immediately after installation
- For roof pitches of  $< 15^\circ$ , please note: Cover with suitable membrane.

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### Roof mounting bracket

Fastening with staples or nails up to 60 mm thick is possible. Further information is available from ITW Befestigungssysteme GmbH. Fasteners must be galvanized or higher. Gutex Thermowall 5in1 can also be fastened with approved screws. Please contact the relevant manufacturers.