

PROCESSING INSTRUCTIONS

FLEX



General

The flexible and diffusion-open wood fibre insulation mat is suitable for use in roof, wall and ceiling constructions as well as for cavity insulation in partition walls, facing shells and installation levels.

Naturheld Flex is particularly easy to clamp – it is installed dry and cannot withstand pressure; it is manufactured and monitored in accordance with DIN 13171.

If Naturheld Flex is installed in the building envelope, an airtight and vapour diffusion-retarding layer must be installed on the inside, and the construction must be rainproof and windproof on the outside.

Naturheld Flex must be protected from moisture and damage, so the open compartments must be sealed airtight on the inside after 4 weeks at the latest.

If the compartment insulation is installed in the building envelope during the cold season, the vapour barrier must be laid immediately afterwards and sealed airtight.

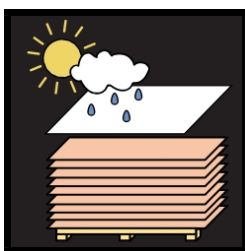
Storage and transport

The material must be checked upon delivery, the package inserts must be observed and the panel sticker must be kept together with the delivery notes.

Naturheld Flex must be stored in a dry place and protected from UV






light. Only remove the packaging during processing.

The pallets must not be stacked on top of each other.



Areas of application

Areas of application according to DIN 4108-10:2015

DZ	Between-rafter insulation, double-shell roof, non-accessible but accessible top floor ceiling	
DI-zk	Internal insulation of the ceiling (underside) or roof Insulation under the rafters/supporting structure, suspended ceilings, etc.	
WH	Insulation of timber frame and timber panel construction	
WI-zk	Internal insulation of the wall	
WTR	Insulation of room partition walls	

Tensile strength: zk = none

Properties of Naturheld Flex

DZ, DI-zk, WH, WI-zk, WTR

- ▲ Between-rafter insulation
 - ▲ Insulation of walls in timber frame and timber stud construction
 - ▲ Insulation of timber beam ceilings
- ▲ Insulation of top floor ceilings
 - ▲ Insulation of installation levels
 - ▲ Insulation of ribs on mineral substrates



PROPERTIES OF NATURHELD FLEX

Labelling	WF-EN 13171-T2-MU1/2-AFr10
Bulk density	50 [kg/m ³]
Nominal thermal conductivity λ_D	0.036 [W/(mK)]
Rated thermal conductivity λ_B	0.038 [W/(mK)]
Fire behaviour according to DIN EN 13501-1	E
Building material class according to DIN 4102-1	B
Full declaration	Wood fibres, polyamide (binding fibre), ammonium sulphate (fire retardant)
Manufacturing process	Dry process
Water vapour diffusion resistance factor μ	1-2
Specific heat capacity	2100 [J/(kgK)]
Waste code numbers according to AVV	030105, 170201

Formats

The width of 575 mm is designed for the standard grid dimension of 625 mm commonly used in timber construction – 625 mm – 60 mm frame width results in a clear dimension of 565 mm. The standard format for timber construction is 575 mm x 1200 mm.

When using metal studs (CW and UW profiles), the panel width is 625 mm. We offer thicknesses of 40, 60, 80 and 100 mm in this width, matching the metal profiles of 50, 75, 100 and 125 mm. The standard format when using metal studs is 625 mm x 1250 mm.

Product overview/timber construction

THICKNESS IN MM	WIDTH IN MM		LENGTH IN MM		M ² PER PALLET		PACKAGES PER PALLET	M ² PER PACKAGE		PIECES	EDGE
40	575	625	1200	1250	82,800	93,750	12	6.90	7.81	120	blunt
50	575		1200		66,240		12	5.52		96	blunt
60	575	625	1200	1250	55,200	62,500	10	5.52	6.25	80	blunt
80	575	625	1200	1250	41,400	46,875	12	3.45	3.90	60	blunt
100	575		1200		33,120		12	2.76		48	blunt
120	575		1200		27,600		10	2.76		40	blunt
140	575		1200		22,080		8	2.76		32	blunt
160	575		1200		20,700		10	2.07		30	blunt
180	575		1200		16,560		8	2.07		24	blunt
200	575		1200		16,560		12	1.38		24	blunt
220	575		1200		13,800		10	1.38		20	blunt
240	575		1200		13,800		10	1.38		20	blunt
260	575		1200		11,400		8	1.38		16	blunt
280	575		1200		11,400		8	1.38		16	blunt
300	575		1200		11,400		8	1.38		16	blunt

Product overview/drywall construction












Thickness in mm	Width in mm	Length in mm	m ² /pallet	Pieces/pallet	Edge
40	625	1250	95.313	122	blunt
60	625	1250	62,500	80	blunt
80	625	1250	46.875	60	blunt
100	625	1250	37,500	48	blunt

Customised production

Possible thicknesses	40 to 300 mm
Possible widths	575 to 1250 mm
Possible lengths	1250 mm to 3000 mm

Cutting

The flexible Naturheld Flex wood fibre insulation mat can be easily cut to size using a wide variety of tools. These include electric handsaws, alligator saws with two counter-rotating serrated blades, jigsaws, insulation saws, circular saws, band saws and insulation knives. The tools listed in the table below are ideal for cutting Naturheld Flex. The list is only an example and is by no means exhaustive.

Cutting tools	Accessories	Comments
Bosch GFZ 16-35 AC 	Serrated knife 2-piece knife set Bosch TF 350 WM 	
Dewalt DWE 397/398/399 	Serrated knife Knife set, 2 pieces Dewalt DT 2979 	
Mafell insulation rope saw DSS 300 cc 	Saw table ST 1700 Vario Volume extractor S 200 	Cutting depth max. 300 mm, 140 mm at 60° angle Suction recommended
Plunge saws 	Kaindl Insucut circular saw blades ø 160–350 mm 	For thin insulation thicknesses in combination with a hand-held circular saw and a guide rail
Festo 	ISC 240 EB cordless insulation saw Cutting attachments SG 240 /W-ISC 	Maximum cutting depth 240 mm
		Hand knife with serrated edge

Installation with excess

Naturheld Flex is installed with an oversize of approximately 10 mm in both length and width – this ensures that the wood fibre insulation mat adheres securely to the compartment and fills it permanently.

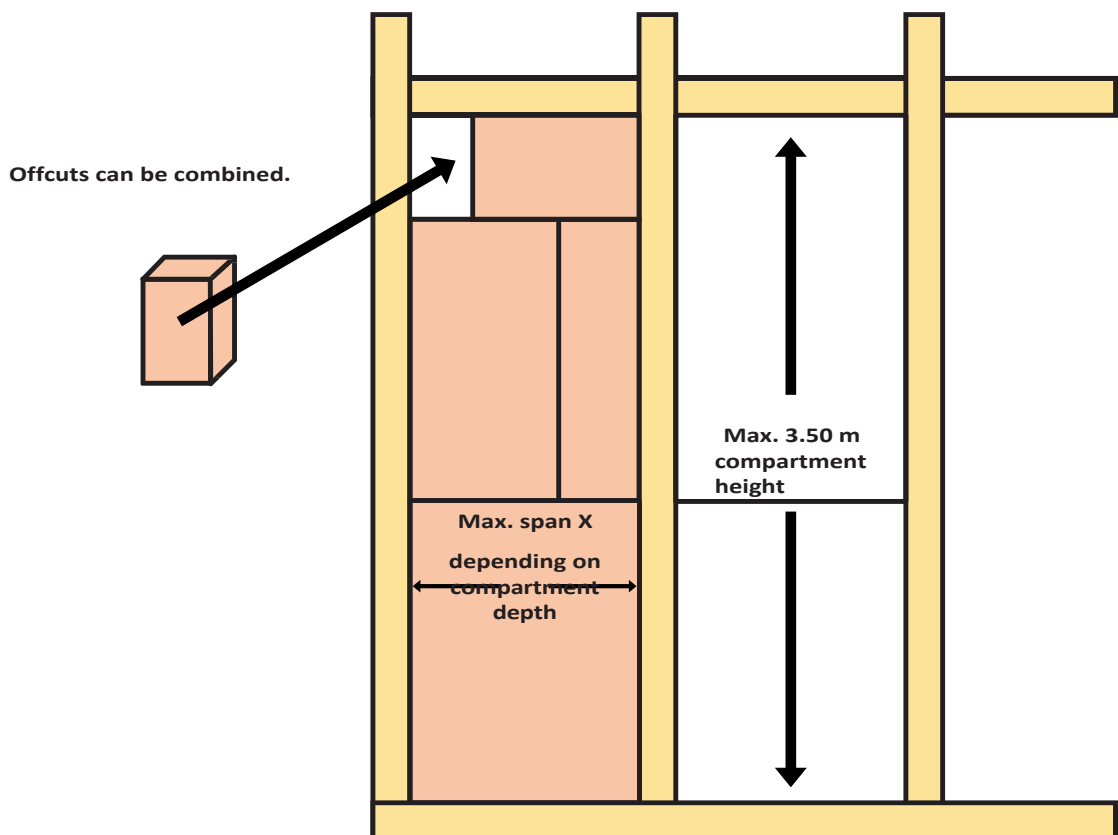
Depending on the area of application, the clamping dimension may vary – it may well be greater for particularly long and wide compartments.

When installing between rafters, it makes a difference whether the rafters are planed or rough-sawn; rough-sawn rafters require less clamping dimension. The additional clamping dimension therefore depends on the thickness of the insulation material, the clear rafter spacing, the roughness of the rafters and the roof pitch.

To minimise waste, leftover pieces can be combined with new sections during installation.

The compartments are limited to storey height or a maximum of 3.50 m by appropriate measures.

The maximum insulation thickness corresponds to the rafter height or the stud depth.



Maximum spans for horizontal installation:

Insulation thickness in mm	Maximum span X in mm
40	450
50	475
60	500
80	550
100	600
120	650
140	700
160	750
180	800
200	850
220	850
Special size 240	900
Special size 260	900
Special size 280	900
Special size 300	900

Important information

Safety

Cutting and installing wood fibre insulation mats generates dust. A dust mask and safety goggles should be worn, especially when working overhead.

Standard dust extraction systems must be used for dust removal in accordance with the regulations of the professional associations; the provisions of TRGS 533 must also be observed.

Temperature load

Built-in elements, such as ceiling spotlights, must not exceed a maximum temperature of 100°C on the surface; otherwise, they must be encapsulated using suitable measures.

Disposal

Disposal as wood and wood-based materials, waste codes AVV 030105 and 170201.



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