

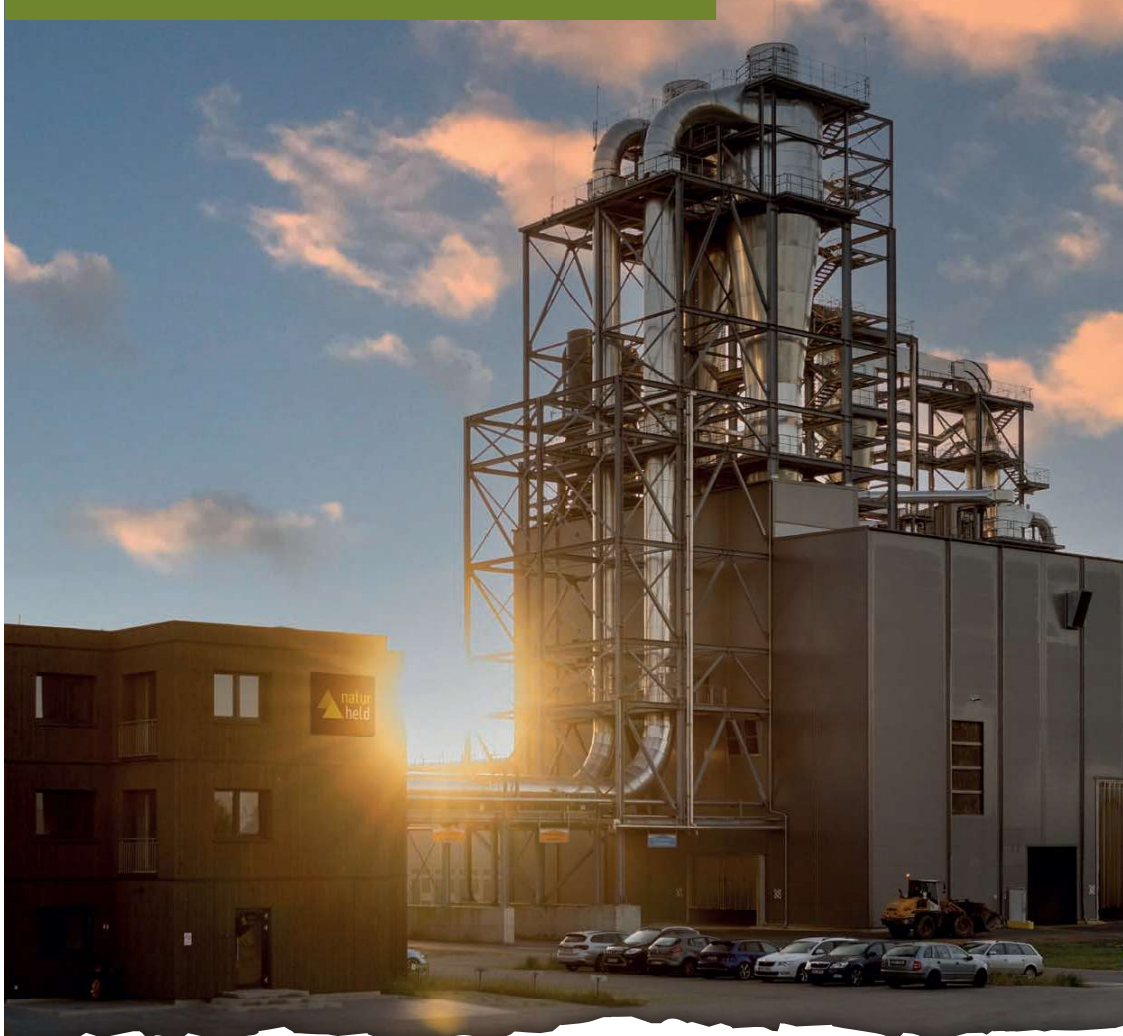


# Generation 2.0

naturheld the best wood fibre  
insulation boards

**PRODUCT OVERVIEW**

# OUR PRODUCTION SITE IN HÜTTEN



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### TECHNICAL HOTLINE

Phone: 09636 / 9209 - 5454  
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## AREAS OF APPLICATION

### CEILING, ROOF

External insulation of roof or ceiling, protected from weathering, insulation under coverings



External insulation of roof or ceiling, protected from weathering, insulation under waterproofing



Insulation between rafters, double-skin roof, non-walkable but accessible top storey ceilings



Internal insulation of the ceiling (on the underside) or the roof, insulation under the rafters/supporting structure, suspended ceiling, etc.



Internal insulation of the ceiling or floor slab (top side) under screed without sound insulation requirements



### WALL

External insulation of the wall behind cladding



External insulation of the wall under plaster



Insulation of double-skin walls, core insulation



Insulation of timber frame and timber panel construction



Interior wall insulation



Insulation of partition walls



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THE IDEAL SOLUTION FOR  
**CONSTRUCTION**  
**AND NATURE**



**ELIGIBLE BUILDINGS WITH NATURHELD:**  
 Our insulating materials fulfil all the requirements of the QNG directive!



**SUSTAINABLE:**

- Wood chips as a sawmill by-product
- Wood chips for own heating plant
- Electricity from sustainable energy sources



**ECOLOGICAL:**

- 100% wood utilisation
- Water treatment at the plant
- Our pallets are disposable
- Wood fibre residues are brought back into production



**PEFC CERTIFIED**  
 This product comes from sustainably managed forests and controlled sources.  
[www.pefc.de](http://www.pefc.de)



**Research centre QUANTENSPRUNG**

**INNOVATIVE:**

- In our newly designed research centre, we are developing pioneering new solutions for timber construction



**ZIEGLER LOGISTIK**

**RELIABLE:**  
 Over 230 low-emission, company-owned, lorries







**ZIEGLER HOLZINDUSTRIE**










**REGIONAL:**

- Made in Germany, Bayern
- Wood chips from the sawmill just a few kilometres away

# PRODUCT FINDER

...you will find the right product for your application!

Product	Format	Edge	Thickness	Applications Din 4108-10			
				DAD	DAA	DZ	DZ
Product	mm		mm				
Product				Rafter insulation under cover <b>sarking board</b>	Insulation under waterproofing <b>flat roof</b>	Insulation between rafters, <b>cavity insulation</b>	for attic <b>cealings</b>
<b>naturheld FLOW</b> Page 16							not walkable
<b>naturheld FLEX</b> Page 18	1220x575	square edged	30-240 (-300*)				not walkable
	1250x625	square edged	40-80				not walkable
<b>naturheld 100</b> Page 26	1250x600	square edged	60-160				
<b>naturheld 110</b> Page 28	1250x600	square edged	80-100				
	1200x400	square edged	120-200				
<b>naturheld 140</b> Page 30	1250x600	square edged	40-60				
	1880x615	T+G	60-180 (-220*)				
<b>naturheld 180</b> Page 32	1880x615	T+G	40-120				
	2550x615	T+G	40-60				
	2550x1185	T+G	60				
<b>naturheld 220</b> Page 34	1250x600	square edged	22-35				
	2550x615	T+G	22-35				

Applications Din 4108-10								
DI	DEO	WAB	WAP	WZ	WH	WI	WI	WTR
								
Interior insulation <b>Roof and ceiling underside</b>	Insulation <b>Floor under screed</b>	Insulation behind a curtain wall	External plastered insulation, approved as ETICS insulation	Insulation between double-ski walls with ventilation	Panelling of timber frame construction and timber panel construction walls, especially prefabrication	Interior wall insulation, <b>plastered</b> Note: from 60mm insulation, the structure must be inspected	Interior wall insulation <b>panelled</b>	Insulation of partition walls
				**				Wooden construction
				**				Metal construction
				**				
				**				
				**				
			80-160					
			40-60					
			Soffit panel					

\* on request    \*\* behind water-draining layer

Suitable product:



NEW TONGUE  
+GROOVE  
PROFILE

**NEW!**

**GENERATION 2.0**

## **MORE STABLE TONGUE AND GROOVE CONNECTION**

Thanks to the rounded edges and the flat end face, the tongue is protected from damage caused by impacts during installation and reliably retains its shape and sealing ability. In addition, the rounding at the base of the tongue reinforces and protects the tongue from breaking, which is unique for soft wood fibreboards.

## **MORE COMFORTABLE HANDLING**

The more robust edges and rounded profiles make it easier and more comfortable to lift and transport the panels.

## **IMPROVED STRENGTH**

Due to the improved formulation and modified process parameters, a higher strength of the board is achieved.

## **THE NEW NATURHELD EDGE PROFILING**

## **SIMPLE INSTALLATION & BETTER JOINABILITY**

The groove entrance is also shaped. This means that the panels can be pushed together easily, even if the substructure is slightly uneven; the continuous rounding prevents tilting and the tongue centres itself when pushed together due to the funnel effect.

## **SECURE SEALING**

The sealing flanks are parallel to the panel surface at 10 mm and therefore seal reliably even with joints of up to 3 mm.

## **EXCELLENT RAIN PROTECTION**

Thanks to the innovative tongue and groove connection, the panel has improved weather protection from a roof pitch of 15°.

# The new naturheld formula for wood fibre insulation

## VERSATILE APPLICATION POSSIBILITIES

The versatile application possibilities of the products enable economical warehousing.

## PROFILING ADAPTED TO THE PANEL THICKNESS

With the thinner panels, the tongue is shorter, 20 and 22 instead of 24 mm. This makes it even more robust and production is more efficient. The 10mm sealing flank is still retained.

## MORE COVERAGE WITH THE SAME GROSS PANEL SIZE

The panels are all milled from the same gross formats, the shorter edge profiling means there is less waste in production and the cover dimension is larger in relation to the gross panel size.

## OPTIMISED SURFACE STRUCTURE FOR INCREASED SLIP RESISTANCE AND SURE-FOOTEDNESS

The clear structuring of the surface improves slip resistance on the roof and the rendering of the façade.



## OUR NEW GENERATION 2.0



# OUR VERSATILE PRODUCTS

## **naturheld 100**

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## **naturheld 110**

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## **naturheld 140**

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## **naturheld 180**

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## **naturheld 220**

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## **naturheld FLOW**

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## **naturheld FLEX**

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## **naturheld LVL P**

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## **naturheld P5**

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## **naturheld ROOF PANELS**

▲ Page 39



## **CAN BE USED VARIABLY FOR ROOF, WALL AND FLOOR**

Whether solid, flexible or as loose fibres, our new naturheld products are always the best choice for insulating new and old buildings. The curved edges enable faster installation, which not only saves time but also labour and costs. Thanks to optimised production, the prices remain as favourable as ever.

The solid boards are symmetrically equipped with tongue and groove and can be used efficiently and quickly as a water-repellent, robust underlay board for walls or internal insulation. Modern roof constructions can be easily realised with a solid naturheld insulation board as a rainproof sub-roof in accordance with ZVDH regulations from a roof pitch of 15°. A thermal insulation composite system (ETICS) as an external wall construction can also be fully insulated with our insulation boards and permanently and effectively protected from the weather with coordinated plaster systems.

# WHY WOOD FIBRE INSULATION

## FOR OUR ENVIRONMENT

Our entire company is consistently orientated towards the guiding principle: 'From tree to house'. It is of great importance to us to utilise the entire trunk and thus to work efficiently and conserve resources. The combined goal of the different divisions: innovative and affordable timber houses for everyone.

Compared to its competitors, naturheld therefore has the invaluable advantage of being able to use material from its own sawmills. In addition, naturheld GmbH can use its own wood waste, such as sapwood and bark, to generate the energy required for gasification, and unlike chewed wood waste, the quality is always consistent. Even the ash contained in the flue gas can be reused. The separated components are used as fertiliser.

## FOR EVERYONE - BECOME CHANGE ITSELF

Climate protection is of the utmost importance to us. Our insulation materials bind the CO<sub>2</sub> contained in the wood and store it for the entire service life of the building. With our naturheld products, we can all help to reduce our carbon footprint and make a joint contribution to climate protection. Together, we can make smart decisions to reduce and reverse global warming. We cordially invite you to join us on our journey to a more sustainable future.



### WATER-REPELLENT

Underlay boards are hydrophobised throughout and can be used on both sides.



### OPTIMAL SOUND INSULATION

Reduces noise and ensures pleasant acoustics.



### 100 % NATURAL

PEFC-certified wood from regional forest areas



### DIFFUSION-OPEN BUILDING

High room air quality for good sleep and well-being.



### HEALTHY LIVING

Natural insulation made from regional wood without questionable additives.



### HEAT PROTECTION IN SUMMER

Cools in summer



### PROTECTION FROM THE COLD IN WINTER

Keeps you reliably warm in winter



### HIGH LEVEL OF FIRE PROTECTION

Very slow fire progress due to heat protection and charring



### CLIMATE PROTECTION

Thanks to the carbon bound in the wood, naturheld insulation actively removes CO<sub>2</sub>.



“

Just a few years ago, it was just a vision. Today, it has become my personal mission: We only have a few viable factors to positively influence climate change. One of the realisable solutions is a shift towards building with wood across the board. I am committed to this turnaround with all the possibilities that my company offers in the various stages of production. It is the driving force behind my actions.

- Stefan Ziegler, CEO

”



# naturheld FLOW

WOOD FIBRE  
BLOW-IN  
INSULATION



PEFC  
PEFC04-1-0071



## AREAS OF APPLICATION DIN 4108-10: DZ, DI-zk, WH, WI-zk, WTR



- ▲ Insulation between rafters
- ▲ Compartment insulation of walls in timber frame and timber stud construction
- ▲ Insulation of wooden joist ceilings
- ▲ Insulation of the attic ceilings
- ▲ Insulation of installation levels
- ▲ Insulation of ribbing on mineral substrates

## TECHNICAL DATA:

Label	ETA-23/0125		
DoP / Declaration of Performance	Flow_01.09.24		
Density	kg/m <sup>3</sup>		33-45
Nominal thermal conductivity λD EU	W/(mK)		0,038
Rated thermal conductivity	λB DE	W/(mK)	0,040
	λB CH	W/(mK)	0,038
	λB AT	W/(mK)	0,039
Fire behaviour according to DIN EN 13501-1			E
PN-EN 13823+A1: 2022-12			B s2 d0
Building material class according to DIN 4102-1			B2
Full declaration	Wood fibres, ammonium sulphate (fire retardant)		
Water vapour diffusion resistance factor			μ 1-2
Specific heat capacity	J/(kgK)		2100
Waste key numbers according to AVV	030105/170201, Wood and wood-based materials, waste wood category A II		

# PACKAGING DETAILS

## PACKAGING / WEIGHT

Packaging of the bales	Weight per bale (kg)	Bales per pallet	Weight of the pallet (kg)
foiled	15	21	315
unfoiled	20	18	360

## SINGLE-VARIETY LOADING (ON STANDARD LORRY, LOADING SPACE 2,40 X 13,60M)

Pallet dimensions (approx.)	Pallets per lorry
1200 x 800 x 2550 (L x W x H)	32



# OUR FLEXIBLE PANELS

## naturheld FLEX

AREAS OF APPLICATION DIN 4108-10:  
DZ, DI-zk, WH, WI-zk, WTR



- ▲ Insulation between rafters
- ▲ Compartment insulation of walls in timber frame and timber stud construction
- ▲ Insulation of wooden joist ceilings
- ▲ Insulation of the attic ceilings
- ▲ Insulation of installation levels
- ▲ Insulation of ribbing on mineral substrates

### TECHNICAL DATA:

Label		WF-EN 13171-T3-MU1/2-AFr10	
Density		kg/m <sup>3</sup>	50
Nominal thermal conductivity $\lambda_D$ EU		W/(mK)	0,036
Rated thermal conductivity	$\lambda_B$ DE	W/(mK)	0,038
	$\lambda_B$ CH	W/(mK)	0,036
	$\lambda_B$ AT	W/(mK)	0,037
Fire behaviour according to DIN EN 13501-1			E
Building material class according to DIN 4102-1			B2
Full declaration		Wood fibres, PP / PE (binding fibre), ammonium sulphate (fire retardant)	
Linear flow resistance		kPa*s/m <sup>2</sup>	5 bis 60mm, 6 ab 80mm
Water vapour diffusion resistance factor			$\mu$ 1-2
Specific heat capacity		J/(kgK)	2100
Waste key numbers according to AVV		030105/170201, Wood and wood-based materials, waste wood category A II	



# naturheld FLEX

*New  
lambda value*

$\lambda_D$   
0,036

## PACKAGING INFORMATION

### TIMBER FRAME CONSTRUCTION, WIDTH 575MM

Format (mm)	Thickness (mm)	m <sup>2</sup> /pallet	pcs/pallet	Packages/ pallet	m <sup>2</sup> /package
1220x575	30*	112,24	160	10	11,22
	40	84,18	120	10	8,42
	50	67,34	96	8	8,42
	60	56,12	80	8	7,02
	80	42,09	60	10	4,21
	100	33,67	48	8	4,21
	120	28,06	40	8	3,51
	140	22,45	32	8	2,81
	160	21,05	30	10	2,10
	180	16,84	24	8	2,10
	200	16,84	24	8	2,10
	220*	14,03	20	10	1,40
	240	14,03	20	10	1,40
	260*	11,22	16	8	1,40
	280*	11,22	16	8	1,40
	300*	11,22	16	8	1,40

### DRY CONSTRUCTION WITH METAL PROFILES, WIDTH 625MM

Format (mm)	Thickness (mm)	m <sup>2</sup> /pallet	pcs/pallet	Packages/ pallet	m <sup>2</sup> /package
1250x625	40	93,75	120	10	9,38
	60	62,50	80	8	7,81
	80	46,88	60	10	4,69

### SINGLE-VARIETY LOADING (ON STANDARD LORRY, LOADING SPACE 2,40 X 13,60M)

Panel format (mm)	Pallet dimensions (approx.)	Pallets per lorry
1220x575	1220 x 1150 x 2550 (L x W x H)	22
1250x625	1250 x 1200 x 2550 (L x W x H)	20

\*on request



**naturheld FLEX**

# OUR SOLID PANELS



The new naturheld edge profiling

## OPTIMISED FORMATS:

**LENGTH:** 1.500 becomes **1.250** | 2.000 becomes **1.880**

This means that the Generation 2.0 can be installed more quickly on roofs and walls, and the adapted length means that more cubic metres fit into a lorry.

**WIDTH:** 580 net becomes **615 GROSS**

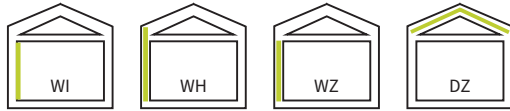
The panels are all milled from the same gross formats, the shorter edge profiling means there is less waste in production and the cover dimension is larger in relation to the gross panel size.

**615  
GROSS**

**1.250 / 1.880 / 2.550**





# naturheld 100

## AREAS OF APPLICATION DIN 4108-10: WI, WH, WZ, DZ



- ▲ New, high-performance, lightweight insulation board
- ▲ For the attic ceiling
- ▲ For roof insulation on formwork or CLT
- ▲ For interior insulation

### TECHNICAL DATA:

Label	WF-EN 13171-T4-CS(10)/Y40-TR7,5-WS1,0-MU3		
Density	kg/m <sup>3</sup>		100
Nominal thermal conductivity $\lambda_D$ EU		W/(mK)	0,037
Rated thermal conductivity	$\lambda_B$ DE 	W/(mK)	0,039
	$\lambda_B$ CH 	W/(mK)	0,037
	$\lambda_B$ AT 	W/(mK)	0,041
Fire behaviour according to DIN EN 13501-1			E
Building material class according to DIN 4102-1			B2
Full declaration	Wood fibres, PMDI adhesive, paraffin		
Compressive stress at 10% compression	kPa		≥ 40
Tensile strength perpendicular to the plane of the panel	kPa		≥ 7,5
Water vapour diffusion resistance factor			μ 3
Specific heat capacity	J/(kgK)		2100
Waste key numbers according to AVV	030105/170201, Wood and wood-based materials, waste wood category A II		



# PACKAGING INFORMATION

## STANDARD FORMAT

Format (mm)	Edge	Thickness (mm)	m <sup>2</sup> /pallet	pcs/pallet
1250x600	square-edged	40	42,00	56
		60	28,50	38
		80	21,00	28
		100	16,50	22
		120	13,50	18
		140	12,00	16
		160	10,50	14

## SINGLE-VARIETY LOADING (ON STANDARD LORRY, LOADING SPACE 2,40 X 13,60M)

Pallet dimensions (approx.)	Pallets per lorry
1250 x 1200 x 1300 (L x W x H)	44



# naturheld 110

## AREAS OF APPLICATION DIN 4108-10: DAA-dh, DI, DZ, WAP, WI, WH, WZ



- ▲ High-performance insulation board for numerous applications
- ▲ Can be plastered directly as ETICS insulation
- ▲ Numerous approved plaster systems
- ▲ Can be plastered or clad directly for interior insulation
- ▲ For the attic ceilings
- ▲ For roof insulation on formwork or CLT
- ▲ Suitable for flat roof insulation

## TECHNICAL DATA:

Label	WF-EN 13171-T5-CS(10/Y)50-TR15-DS(70,-)3-AFr20-WS1,0-MU3		
Density	kg/m <sup>3</sup>		110
Nominal thermal conductivity λD EU		W/(mK)	0,039
Rated thermal conductivity	λB DE 	W/(mK)	0,041
	λB CH 	W/(mK)	0,039
	λB AT 	W/(mK)	0,043
Fire behaviour according to DIN EN 13501-1			E
Building material class according to DIN 4102-1			B2
Full declaration	Wood fibres, PMDI adhesive, paraffin		
Compressive stress at 10% compression	kPa		≥ 50
Tensile strength perpendicular to the plane of the panel	kPa		≥ 15
Water vapour diffusion resistance factor			μ 3
Specific heat capacity	J/(kgK)		2100
Dynamic stiffness	MN/m <sup>3</sup>		80mm<40, 100mm<30, 160mm<20
Linear flow resistance	kPa*s/m <sup>2</sup>		80mm>50, 100mm>45, 160mm>35
Waste key numbers according to AVV	030105/170201, Wood and wood-based materials, waste wood category A II		

Previous name: naturheld Wand 110



# PACKAGING INFORMATION

## STANDARD FORMAT

Format (mm)	Edge	Thickness (mm)	m <sup>2</sup> /pallet	pcs/pallet
1250x600	square-edged	80	21,00	28
		100	16,50	22
1200x400		120	12,96	27
		140	11,52	24
		160	10,08	21
		180	8,64	18
		200	7,20	15

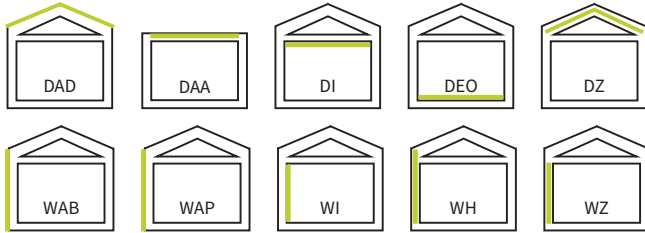
## SINGLE-VARIETY LOADING (ON STANDARD LORRY, LOADING SPACE 2,40 X 13,60M)

Panel format (mm)	Pallet dimensions (approx.)	Pallets per lorry
1250x600	1250 x 1200 x 1300 (L x W x H)	44
1200x400	1200 x 1200 x 1300 (L x W x H)	44



# naturheld 140

**AREAS OF APPLICATION DIN 4108-10:**  
DAD, DAA-ds, DI, DEO-ds, WAB ds, WAP, WI, WH, WZ, DZ



- ▲ Universal, lightweight insulation board
- ▲ UDP-A underlay board as a rainproof sub-roof in accordance with ZVDH regulations from a roof pitch of 15° (N+F 60-180mm)
- ▲ UDP-A: Tested as a rainproof sub-roof in accordance with ÖN B4119 by Holzforschung Austria (N+F 60-180mm)
- ▲ ETICS insulation can be plastered directly, for timber frame construction and stud frame (N+F 80-160mm)
- ▲ Numerous approved plaster systems
- ▲ 4 weeks freely weatherable
- ▲ For rear-ventilated facades
- ▲ Can be plastered or clad directly for interior insulation
- ▲ For the attic ceilings
- ▲ For floor insulation under wet screed
- ▲ Suitable for flat roof insulation

## TECHNICAL DATA:

Label	WF-EN 13171-T5-CS(10/Y)100-TR20-DS(70,-)3-AFr60-WS1,0-MU3		
Density	kg/m <sup>3</sup>	140	
Nominal thermal conductivity λD EU	W/(mK)	0,041	
Rated thermal conductivity	λB DE	W/(mK)	0,043
	λB CH	W/(mK)	0,041
	λB AT	W/(mK)	0,045
Fire behaviour according to DIN EN 13501-1		E	
Building material class according to DIN 4102-1		B2	
Full declaration	Wood fibres, PMDI adhesive, paraffin		
Compressive stress at 10% compression	kPa	≥ 100	
Tensile strength perpendicular to the plane of the panel	kPa	≥ 20	
Water vapour diffusion resistance factor		μ 3	
Specific heat capacity	J/(kgK)	2100	
Dynamic stiffness	MN/m <sup>3</sup>	60mm<65, 80mm<50, 140mm<30	
Linear flow resistance	kPa*s/m <sup>2</sup>	>60	
Waste key numbers according to AVV	030105/170201, Wood and wood-based materials, waste wood category A II		

▲ Previous name: naturheld Wand 140



# PACKAGING INFORMATION

**LARGE FORMAT, FOR THE INSTALLATION LEVEL IN PREFABRICATION**

Format (mm)	Edge	Thickness (mm)	m <sup>2</sup> /pallet	pcs/pallet
2635x1250	square-edged	50*	72,46	22

**INTERIOR INSULATION AND INSTALLATION LEVEL**

Format (mm)	Edge	Thickness (mm)	m <sup>2</sup> /pallet	pcs/pallet
1250x600	square-edged	40	42,00	56
		60	28,50	38

**WITH TONGUE AND GROOVE, FOR FAÇADES AND ROOFS**

Format (mm)	Edge	Thickness (mm)	m <sup>2</sup> /pallet (gross dimension)	m <sup>2</sup> /pallet (cover dimension)	pcs/pallet
1880x615	Generation 2.0 with the new tongue and groove profile	60	43,94	41,68	38
		80	32,37	30,71	28
		100	25,44	24,13	22
		120	20,81	19,74	18
		140	18,50	17,55	16
		160	16,19	15,36	14
		180	13,87	13,16	12
		200*	11,56	10,97	10
		220*	11,56	10,97	10

**SINGLE-VARIETY LOADING (ON STANDARD LORRY, LOADING SPACE 2,40 X 13,60M)**

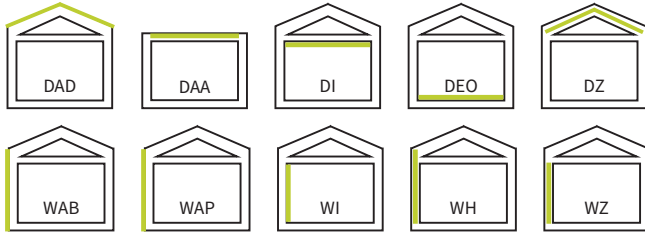
Panel format (mm)	Pallet dimensions (approx.)	Pallets per lorry
2635x1250	2635 x 1250 x 1300 (L x W x H)	20
1250x600	1250 x 1200 x 1300 (L x W x H)	40
1880x615	1880 x 1210 x 1300 (L x W x H)	28

\*on request



# naturheld 180

**AREAS OF APPLICATION DIN 4108-10:**  
DAD, DAA-ds, DI, DEO-ds, WAB-ds, WAP, WI, WH, WZ, DZ



- ▲ Robust universal insulation board
- ▲ UDP-A underlay board as a rainproof sub-roof in accordance with ZVDH regulations from a roof pitch of 15°
- ▲ UDP-A: Tested as a rainproof sub-roof in accordance with ÖN B4119 at Holzforschung Austria
- ▲ ETICS for timber frame construction up to 83.3 cm centre distance
- ▲ Numerous approved plaster systems
- ▲ Can be exposed to the weather for up to 12 weeks if the construction is open from the inside and the insulation board is visible

- ▲ Can be exposed to the weather for 4 weeks when the component has been removed and insulated
- ▲ For rear-ventilated facades
- ▲ Can be plastered directly for interior insulation
- ▲ For the attic ceilings
- ▲ For floor insulation under wet screed
- ▲ Suitable for flat roof insulation

## TECHNICAL DATA:

Label	WF-EN 13171-T5-CS(10/Y)150-TR30-DS(70,-)3-AFr100-WS1,0-MU3		
Density	kg/m <sup>3</sup>	180	
Nominal thermal conductivity λD EU	W/(mK)	0,043	
Rated thermal conductivity	λB DE	W/(mK)	0,045
	λB CH	W/(mK)	0,043
	λB AT	W/(mK)	0,047
Fire behaviour according to DIN EN 13501-1		E	
Building material class according to DIN 4102-1		B2	
Full declaration	Wood fibres, PMDI adhesive, paraffin		
Compressive stress at 10% compression	kPa	≥ 150	
Tensile strength perpendicular to the plane of the panel	kPa	≥ 30	
Water vapour diffusion resistance factor		μ 3	
Specific heat capacity	J/(kgK)	2100	
Dynamic stiffness	MN/m <sup>3</sup>	40 mm < 90, 60mm < 60	
Linear flow resistance	kPa*s/m <sup>2</sup>	>100	
Waste key numbers according to AVV	030105/170201, Wood and wood-based materials, waste wood category A II		

▲ Previous name: naturheld Wand 180 UDP-A

# PACKAGING INFORMATION

## LARGE FORMAT, FOR PREFABRICATION

Format (mm)	Edge	Thickness (mm)	m <sup>2</sup> /pallet (gross dimension)	m <sup>2</sup> /pallet (cover dimension)	pcs/pallet
3000x1250	square-edged	60*	71,25		19
2550x1185	Generation 2.0 with the new tongue and groove profile	60	57,41	55,72	19

## LONG FORMAT WITH TONGUE AND GROOVE, FOR FAST WORK ON ROOFS AND FAÇADES

Format (mm)	Edge	Thickness (mm)	m <sup>2</sup> /pallet (gross dimension)	m <sup>2</sup> /pallet (cover dimension)	pcs/pallet
2550x615	Generation 2.0 with the new tongue and groove profile	40	87,82	83,95	56
		60	59,59	56,73	38

## WITH TONGUE AND GROOVE, FOR FAÇADES AND ROOFS

Format (mm)	Edge	Thickness (mm)	m <sup>2</sup> /pallet (gross dimension)	m <sup>2</sup> /pallet (cover dimension)	pcs/pallet
1880x615	Generation 2.0 with the new tongue and groove profile	40	64,75	61,70	56
		60	43,94	41,68	38
		80	32,37	30,71	28
		100	25,44	24,13	22
		120	20,81	19,74	18

## SINGLE-VARIETY LOADING (ON STANDARD LORRY, LOADING SPACE 2,40 X 13,60M)

Panel format (mm)	Pallet dimensions (approx.)	Pallets per lorry
3000x1250	3000 x 1250 x 1300 (L x W x H)	16
2550x1185	2550 x 1185 x 1300 (L x W x H)	20
2550x615	2550 x 1210 x 1300 (L x W x H)	20
1880x615	1880 x 1210 x 1300 (L x W x H)	28

\*on request

# naturheld 220

## AREAS OF APPLICATION DIN 4108-10: DAD, DEO-ds, WAB-ds, WI, WH, WZ



### With the new tongue and groove profile:

- ▲ High-strength insulation board for various applications
- ▲ UDP-A underlay board as a rainproof sub-roof in accordance with ZVDH regulations from a roof pitch of 15°
- ▲ UDP-A: Tested as a rainproof sub-roof in accordance with ÖN B4119 by Holzforschung Austria
- ▲ For rear-ventilated facades
- ▲ Can be exposed to the weather for up to 12 weeks if the construction is open from the inside and the insulation board is visible
- ▲ Can be exposed to the weather for 4 weeks when the component has been removed and insulated

### Square-edged:

- ▲ As a pressure-resistant substructure for dry and wet screed
- ▲ Can be plastered directly for interior insulation
- ▲ As reveal panel for ETICS

### TECHNICAL DATA:

Label	WF-EN 13171-T5-CS(10/Y)200-TR30-DS(70,-)3-AFr100-WS1,0-MU5		
Density	kg/m <sup>3</sup>		220
Nominal thermal conductivity λD EU	 W/(mK)		0,047
Rated thermal conductivity	λB DE 	W/(mK)	0,049
	λB CH 	W/(mK)	0,047
	λB AT 	W/(mK)	0,051
Fire behaviour according to DIN EN 13501-1			E
Building material class according to DIN 4102-1			B2
Full declaration	Wood fibres, PMDI adhesive, paraffin		
Compressive stress at 10% compression	kPa		≥ 200
Tensile strength perpendicular to the plane of the panel	kPa		≥ 50
Water vapour diffusion resistance factor			μ 5
Specific heat capacity	J/(kgK)		2100
Dynamic stiffness	MN/m <sup>3</sup>		100
Linear flow resistance	kPa*s/m <sup>2</sup>		>100
Waste key numbers according to AVV	030105/170201, Wood and wood-based materials, waste wood category A II		

- ▲ Previous name: naturheld Dach 220 and Innen 220



# PACKAGING INFORMATION

## BOTTOM COVER PANEL WITH PROFILED EDGE

Format (mm)	Edge	Thickness (mm)	m <sup>2</sup> /pallet (gross dimension)	m <sup>2</sup> /pallet (cover dimension)	pcs/pallet
2550x615	Generation 2.0 with the new tongue and groove profile	22	163,10	156,56	104
		35	100,37	95,94	64

## SQUARE-EDGE

Format (mm)	Edge	Thickness (mm)	m <sup>2</sup> /pallet	pcs/pallet
1250x600	square-edged	22	78,00	104
		35	48,00	64

## SINGLE-VARIETY LOADING (ON STANDARD LORRY, LOADING SPACE 2,40 X 13,60M)

Panel format (mm)	Pallet dimensions (approx.)	Pallets per lorry
2550x615	2550 x 1210 x 1300 (L x W x H)	20
1250x600	1250 x 1200 x 1300 (L x W x H)	40



# naturheld LVL P

- ▲ Laminated veneer lumber made from rotary-cut softwood veneers
- ▲ For bar-shaped components such as beams or columns
- ▲ High strength and high resistance to deformation
- ▲ Slim cross-sections with high dimensional stability
- ▲ Consisting exclusively of longitudinal veneer layers

## TECHNICAL DATA:

	VMG LIGNUM LVL 48P H= 300 MM		GLUED TIMBER GL 24H H= 300 MM			SAWN TIMBER C24 H=300MM		
	STRENGTH MPA	THICKNESS MM	STRENGTH MPA	THICKNESS MM	INCREASED MATERIAL CONSUMPTION COMPARED TO LVL	STRENGTH MPA	THICKNESS MM	INCREASED MATERIAL CONSUMPTION COMPARED TO LVL
Bending strength, on edge, parallel to the grain	44,0	45	24,0	80	78%	24,0	89	99%
Tensile strength, parallel to the grain	39,0	45	19,2	89	97%	14,5	131	191%
Compressive strength, parallel to the grain	39,0	45	24,0	76	69%	21,0	91	101%
Compressive strength, perpendicular to the grain	7,0	45	2,5	131	192%	2,5	137	203%
Shear strength, upright, parallel to the grain	4,6	45	3,5	72	60%	4,0	75	66%
Modulus of elasticity, mean value, parallel to the fibre	14 000	45	11 500	55	22%	11 000	57	27%

# PACKAGING INFORMATION

## STANDARD FORMAT

THICKNESS IN MM	WIDTH IN MM	LENGTH IN MM	STK/PACKAGE	M <sup>3</sup> /PACKAGE
39	240	13000	30	3,650
39	300	13000	24	3,650
45	100	13000	72	4,212
45	120	13000	60	4,212
45	160	13000	42	3,931
45	200	13000	36	4,212
45	240	13000	30	4,212
45	300	13000	24	4,212
45	360	13000	18	3,791
45	400	13000	18	4,212
57	200	13000	24	3,557
57	240	13000	20	3,557
57	300	13000	16	3,557
75	240	13000	20	4,680
75	300	13000	16	4,680

	PACKAGE OPENING	CUTTING	JOINING
ADDITIONAL COSTS OPTIONAL	✓	✓	✓



# naturheld Particleboard P5

## TECHNICAL DATA:

	Unit	P5			
	mm	10-12	15-20	> 20-22	38
Bending strength (lengthwise)	N/mm <sup>2</sup>	≥ 18	≥ 16	≥ 14	≥ 10
Bending strength (transverse)	N/mm <sup>2</sup>	≥ 18	≥ 16	≥ 14	≥ 10
Modulus of elasticity (lengthwise)	N/mm <sup>2</sup>	≥ 2550	≥ 2400	≥ 2150	≥ 1700
Modulus of elasticity (transverse)	N/mm <sup>2</sup>	≥ 2550	≥ 2400	≥ 2150	≥ 1700
Shear strength	N/mm <sup>2</sup>	≥ 0,45	≥ 0,45	≥ 0,40	≥ 0,30
24h thickness swelling	%	11	10	10	9
Formaldehyde class	Class	E1			
Vapour permeability S <sub>d</sub>	m	15/50			
Thermal conductivity λ	W/(m·k)	0,12			
Fire resistance class	Class	D-s2, d0			

## PACKAGING INFORMATION

### NATURHELD PARTICLE BOARD P5 T+G

THICKNESS IN MM	WIDTH IN MM (COVER SIZE)	LENGTH IN MM (COVER SIZE)	STK/PACKAGE	M <sup>2</sup> / PALLET
22	600	2400	40	57,60

# naturheld Roof batten S10/frame C24M



## PACKAGING INFORMATION

### NATURHELD CE ROOF BATTENS TS ACCORDING TO DIN 4074-1 S10

THICKNESS IN MM	WIDTH IN MM	LENGTH IN MM	STK/PACKAGE	M <sup>3</sup> /PACKAGE
30	50	4000	560	3,360
30	50	5000	560	4,200
40	60	4000	378	3,629
40	60	5000	378	4,536

### NATURHELD FRAME C24 LEVELLED

THICKNESS IN MM	WIDTH IN MM	LENGTH IN MM	STK/PACKAGE	M <sup>3</sup> /PACKAGE
40	80	4000	308	3,942

# OUR CERTIFICATES



## NATURHELD „WALD-TÜV“ TESTED

PEFC is a transparent and independent system for ensuring sustainable forest management. PEFC certification is therefore a kind of global 'forest MOT'. Wood and paper products with the PEFC seal come from ecologically, economically and socially sustainable forest management. Naturheld's sustainable production naturally only uses PEFC-certified wood from forest areas in Bavaria.



## CE KONFORM – EU-WIDE PROMISE OF QUALITY

CE stands for 'Conformité Européenne' - 'European Conformity'. The CE marking of our Naturheld products proves that our wood fibre insulation meets all the applicable basic requirements of the European Union, e.g. in terms of warranty, health protection, safety standards and environmental and consumer protection. To this end, our products have successfully undergone conformity assessment procedures. Processors throughout the EU can benefit from our CE quality promise.



## ISO 50001 CERTIFICATE: MAXIMUM ENERGY EFFICIENCY

Naturheld's high energy efficiency has been recognised: ISO 50001 certifies companies' future-oriented energy management systems at European level. Efficiency potential is to be tapped, energy costs reduced and greenhouse gas emissions minimised. It is logical that we score highly with our 100% self-generated heat from bark and the use of wood as a sustainable raw material for our insulation products.



## FOR A FUTURE THAT IS FRIENDLY TO WOOD

We support the German Timber Industry Council's (DHWR) initiative for active climate protection. The vision is to establish the central role of wood in a sustainable, climate-friendly future. Germany should be a leader in the utilisation and processing of sustainable, domestic wood - for the benefit of the climate, our forests and people, and the initiative should secure jobs in the timber industry while making an important contribution to global warming.



## NATURHELD IS 'QNG READY'

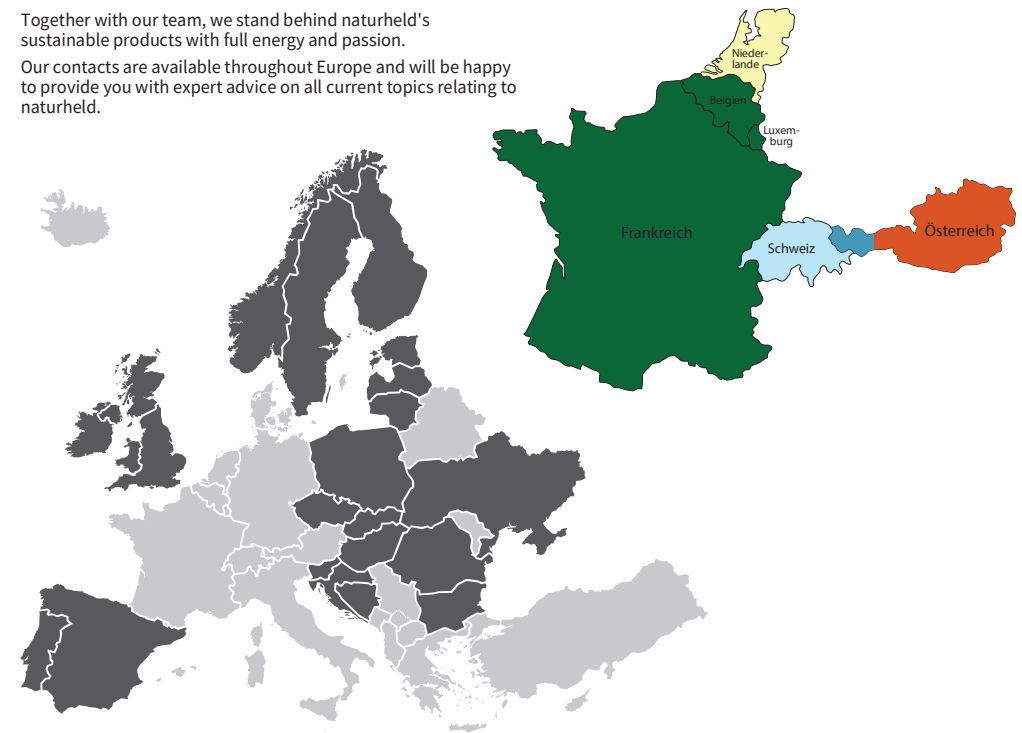
The 'Quality Seal for Sustainable Buildings' (QNG) is a state seal of approval that takes a holistic view of a building and its surroundings: the focus is not only on energy consumption, but also on the entire life cycle of the materials - from production to recycling. Products labelled 'QNG ready' fulfil the requirements catalogue of the QNG label's profile 3.1.3. This helps planners, construction companies and investors to choose from those building products that make QNG certification of the entire building possible in the first place. our Naturheld wood fibre insulation is 'QNG ready'. This means that our products can be used perfectly in the construction of subsidised sustainable buildings - whether new or old.



# OUR TEAM



Together with our team, we stand behind naturheld's sustainable products with full energy and passion. Our contacts are available throughout Europe and will be happy to provide you with expert advice on all current topics relating to naturheld.



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