

# Fibertherm flex 50

Flexible thermal insulation from wood

**Beton**  **Wood**

Environmentally-friendly insulation system  
made from natural wood fibres



## AREAS OF APPLICATION

Flexible cavity insulation in roof, dry wall and floor constructions

Cavity insulation for partition walls, external walls and service zones



## MATERIAL

Wood fiber insulation board produced according to DIN EN 13171, with continuous quality control.

The wood used comes from well-managed forests and is independently certified according to the guidelines of the FSC® (Forest Stewardship Council®).

- Flexible thermal insulation
- Easy handling and classified as non-irritant to skin
- Good compression strength
- Expands to fit adjoining components
- Excellent insulation properties in winter and summer
- Water vapour open for a healthy room environment
- Helps to regulate the indoor climate
- Provides a green architectural solution
- Ecological and environmentally-friendly, fully recyclable
- Construction material tested and authorized according to current European standards
- Fully recyclable
- Made from FSC® certified woodfibre

For more informations about the uses and the installation,  
our offices are ready to answer your questions on [www.fibradilegno.com](http://www.fibradilegno.com)



### | AREAS OF APPLICATION (according to national regulations)

Between rafter and joist insulation, dry wall insulation and loft insulation
Insulation of timber frame structures
Wall insulation
Internal partition wall insulation

### | HEAT PROTECTION

FiberTherm flex 50 makes a significant contribution to your comfort at home due to its excellent insulation performance in winter. FiberTherm flex 50 provides optimum heat protection for your whole structure including walls, ceilings and roofs.

In addition, thanks to its low thermal conductivity and high heat capacity, FiberTherm flex 50 also protects your house against overheating in summer. The high material density of approximately 50 kg/m<sup>3</sup> and the high specific heat capacity of 2100 J/kgK (more than twice as high as mineral wool) provide heat insulation on the hottest days.

### | MORE VITALITY IN A HEALTHY ROOM ENVIRONMENT

Whether you feel really comfortable within your own four walls depends on many factors but the right environmental climate is definitely a key factor, so are pleasant temperature, optimum humidity and fresh air.

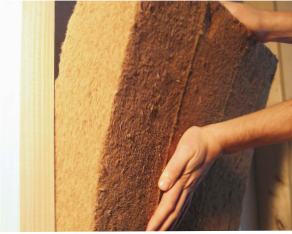
FiberTherm flex 50 consists of natural wood fibres and demonstrates all the advantages of wood as a natural building material. This flexible insulation board has a water vapour open structure, so that water vapour can pass through to the ventilated cavity – in a similar way to breathable fabrics.



Wood fibres have a much higher capacity to retain moisture than conventional insulating materials.

As a result, FiberTherm flex 50 makes a contribution to the regulation of the air humidity (e.g. when installed as inner wall insulation). Additionally, its high capacity to retain moisture prevents condensation risks. The entire construction is safeguarded against interstitial condensation.

Using FiberTherm flex 50 for both external or internal insulation, sound is effectively absorbed. Furthermore, due to its strong compression resistance and expansion characteristics, FiberTherm flex 50 contributes to the elimination of the airborne sound permanently by ensuring that all voids remain filled.



## ECOLOGY

The raw material for all FiberTherm wood fibre insulating materials originates from sustainable forestry, which complies with the strict requirements of the FSC® (Forest Stewardship Council®). The goal of the FSC® is the promotion of environmentally-friendly, socially responsible and economically sustainable forest management. Consequently those using FiberTherm flex 50 make a significant contribution to climate protection.

An average tree stores approximately 1 tonne of CO<sup>2</sup> during its growth and at the same time produces 0.7 tonnes of oxygen.

The CO<sup>2</sup> stored in the trees in the form of carbon remains in the finished product – while the replanted trees continue to absorb the greenhouse gas CO<sup>2</sup> from the atmosphere.

## MACHINING – SIMPLE AND NON ALLERGENIC

FiberTherm flex 50 is characterised by good compression resistance as well as dimensional stability. Cut sizes maintain their form and are safe to install even when done so overhead. Thanks to the flexible structure of the insulation material, smaller unevenness can easily be levelled.



As with all FiberTherm natural fibre insulating materials, FiberTherm flex 50 is particularly user friendly and will not knowingly cause itching or scratching – whether during cutting or installing. In order to make simple and uncomplicated cuts, it is best to use a special FiberTherm insulation knife or an electric all purpose saw (recommendation: Bosch GFZ A 14-35). Custom made insulation knives available direct from FiberTherm.

FiberTherm flex 50 is installed into voids using minimum pressure (cut the board

10mm oversize to assist friction fitting). For ‚Do-It-Yourself‘ users we recommend the use of 2x100mm FiberTherm flex 50 sheets for an insulation thickness of 200mm.

FiberTherm flex 50's standard widths are appropriate for general timber frames centres. Off cuts may be used to fill small voids to minimize wastage. To fill wider voids install the boards in a horizontal direction. Installation voids for FiberTherm flex 50 should not exceed three meters in height without additional support. Walls insulated with FiberTherm flex 50 should be weathertight within 4 weeks to avoid damage to the insulation. FiberTherm flex 50 must be protected against moisture.



## RAW MATERIAL

The raw material for FiberTherm flex comes from thinnings of surrounding pine forests and from saw mill residue.

No conventional formaldehyde or PMDI binders are used in the production of FiberTherm wood fibre insulating materials. Based on this, FiberTherm flex falls far below the minimum value of 0.1 parts per million for formaldehyde emissions, required by the World Health Organisation (WHO).

Due to the constant control of raw materials during the production and by third party supervision, FiberTherm products are certified as emission free and non hazardous.

## TIP

When FiberTherm flex 50 is fitted in winter months, a vapour barrier should be fitted immediately to the inside face to prevent moisture uptake by the insulation.

Thickness (mm)	Dimension (mm)	Weight / m <sup>2</sup> (kg)	Pieces/Package	Packages/ Pallet	Surface/Pallet(m <sup>2</sup> )	Weight / Pallet (kg)
20	1.220 * 575	1,00	24	10	168,4	ca. 186
30	1.220 * 575	1,50	16	10	112,2	ca. 186
40	1.220 * 575	2,00	10	12	84,2	ca. 186
50	1.220 * 575	2,50	9	10	63,1	ca. 186
60	1.220 * 575	3,00	8	10	56,1	ca. 186
80	1.220 * 575	4,00	6	10	42,1	ca. 170
100	1.220 * 575	5,00	4	12	33,7	ca. 170
120	1.220 * 575	6,00	4	10	28,1	ca. 175
140	1.220 * 575	7,00	4	8	22,4	ca. 160
160	1.220 * 575	8,00	3	10	21,0	ca. 170
180	1.220 * 575	9,00	3	8	16,8	ca. 190
200	1.220 * 575	10,00	2	12	16,8	ca. 200
220	1.220 * 575	11,00	2	10	14,0	ca. 170
240	1.220 * 575	12,00	2	10	14,0	ca. 175

| RECOMMENDATIONS

FiberTherm flex 50 must be kept dry

In case of moisture ingress please dry immediately and prevent further moisture uptake

FiberTherm flex 50 should be stored flat on a level surface

Transport packaging should only be removed once the pallet is on a safe and level surface

For dust extraction please refer to national requirements



Rated value of thermal conductivity according to SIA  $\lambda=0.038$  [W/(m\*K)]

| TECHNICAL CHARACTERISTICS

Fibertherm flex 50

Produced and supervised according to	DIN EN 13171
Board designation	WF – EN 13171 – T3 – TR1 – AF5
Fire class according to EN 13501-1	E
Declared thermal conductivity $\lambda_D$ [W / (m * K)]	0,038
Declared thermal resistance $R_D$ [(m <sup>2</sup> * K) / W]	0,50(20) / 0,75(30) / 1,05(40) / 1,30(50) / 1,55(60) / 2,10(80) / 2,60(100) / 3,15(120) / 3,65(140) / 4,20(160) / 4,70 (180) / 5,25(200) / 5,75(220) / 6,30(240)
Thermal conductivity $\lambda$ [W / (m * K)]	0,038 (according to Z-23.15 - 14.52)
Density [kg / m <sup>3</sup> ]	ca. 50
Water vapour diffusion resistance value $\mu$	1/2
Specific heat capacity $c$ [J/(kg * K)]	2.100
Declared level of airflow resistance [(kPa * s) / m <sup>2</sup> ]	$\geq 5$
Waste code (EAK)	030105/170201
Raw materials	wood fibres, polyolefin fibres, ammonium sulfate

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