PAVAFLEX

Flexible Wood Fibre Insulation Batts for between Studs, Rafters and Joists

pavatex

Construct. Insulate. Relax.

Pavaflex Characteristics

Produced According to EN 13171

Pavaflex flexible wood fibre insulation is a natural product, which comes from renewable and sustainable FSC and PEFC certified timber off-cuts. These off-cuts are sourced from local sawmills and only new timber is used. Because the CE marked wood fibre insulation significantly reduces heat loss from buildings, carbon emissions into the atmosphere are greatly reduced from the cradle to the grave. Due to Pavaflex's density of 55 kg/m³ it is very slump resistant and easy to install between studs, rafters and floor joists. It also absorbs airborne noise within cavities.

Pavaflex is both hygroscopic and vapour permeable due to its fibrous content. This means that it can absorb water vapour from the internal atmosphere and this will then pass through the building fabric so that it can evaporate to the outside. This provides a drier, healthier and more comfortable internal micro-climate and significantly reduces any possibility of mould growth and condensation on the internal surfaces. Breathable insulation is particularly critical on older or historic buildings which must be able to breathe to prevent decay and condensation.

Pavaflex insulation provides excellent thermal resistance – it has a thermal conductivity figure of 0.038 W/mK which is very similar to most common man-made insulation materials. Because it is denser than most other flexible insulation materials it very snugly fits within vertical cavities without sagging or falling out. Sagging would cause significant heat to escape which would waste energy. If even lower U-value figures are required or a reduction in thermal bridging, it can be combined with Pavatex wood fibre rigid insulation softboards.

Pavaflex flexible wood fibre batts have a high Specific Heat Capacity and a long thermal lag time which means that it stores heat during the warmest times of the day and then releases it as the building cools. This high thermal mass quality means wood fibre keeps buildings warm in winter and cool in summer, creating an ambient, comfortable temperature all year round. This is particularly critical in lightweight buildings such as timber frame structures. Airborne noise will also be reduced in these buildings.

Pavaflex

Thickness (mm)	Weight (kg / m²)	Batt Size (cm)	No. Batts per Pack	No. Packs per Pallet	No. Batts Per Pallet	M² per Pallet	KG per Pallet	Edge Profile
50	2.74	57.5 x 135	9	10	90	69.86	209	Square Edge
80	4.39	57.5 x 135	4	14	56	43.47	208	Square Edge
100	5.49	57.5 x 135	3	14	42	32.60	196	Square Edge
140	7.68	57.5 x 135	2	16	32	24.84	208	Square Edge
50	2.74	37.5 x 135	6	21	126	63.79	176	Square Edge
80	4.39	37.5 x 135	4	21	84	42.53	188	Square Edge
100	5.49	37.5 x 135	3	21	63	31.89	176	Square Edge
140	7.68	37.5 x 135	2	24	48	24.30	188	Square Edge

Technical Details	Pavaflex
Density (kg / m³)	55
Declared Thermal Conductivity λ D (W/mK)	0.038
Vapour Diffusion Factor μ	2
Specific Heat Capacity - C (J/kgK)	2100
Tensile Strength Perpendicular to Plane of Board (kPa)	-
Compression Strength at 10% (kPa)	-
Fire Behaviour (EN 13501-1)	Class E
Building Material Class (DIN 4102-1)	B2
Waste Code According to European Waste Catalogue	030105 - 170604
Identification Code	WF-EN13171-T3-MU2-AF5

Application

Roofs

Pavaflex is easily and safely installed between the rafters in the roof construction because it is a flexible insulation which is very slump resistant due to its high density. This will ensure a good fit without gaps, and therefore the avoidance of thermal leakage. It comes in a wide range of thicknesses to further enhance the simplicity of the fitting process. It fits snugly between rafters at 400mm or 600 mm centres. Pavaflex insulation has a low thermal conductivity of 0.038 W/mK and a high Specific Heat Capacity of 2100 J/kgK so when it is installed into roof constructions it will keep properties warm in winter and cool in summer leading to an ambient year round temperature. This effect will be further enhanced when it is used in conjunction with Pavatex Isolair or Pavatherm-Plus wood fibre insulation sarking boards over the rafters or Pavatherm under the rafters. This is particularly critical if the attic is to be used as a living space. External airborne noise such as traffic or airplane noise will also be reduced within the roof area.

Walls

External walls are one of the main areas of heat loss within buildings. Pavaflex is suitable for insulating between the studs of timber and metal framed walls at 400mm or 600mm centres, giving very good thermal insulation results. This will provide a breathable and vapour permeable wall solution so that air moisture within the property will be regulated which will create a drier and more comfortable internal environment. For optimal results the Pavaflex insulation should be covered with the rigid Pavadentro wood fibre boards which can be plastered directly with a breathable plaster e.g. lime or clay plaster. This will eliminate thermal bridging. Alternatively plasterboard or a suitable wallboard can be fixed to the studs.

Some common man-made insulation materials are very vapour open such as mineral wool, but it has poor hygroscopic and capillarity characteristics which mean that if it does get damp from condensation, it will take a long time to dry out. Also wet mineral wool tends to sag downwards with the weight of the water, so that it leaves gaps around the edges of the insulation allowing heat to escape and therefore resulting in condensation on the walls.

Floors

Pavaflex is laid snugly between the joists in timber floor structures to reduce cold coming up through the floor. For optimal results it is best used with rigid wood fibre boards on top of the sub-deck to reduce thermal bridging through the joists. If used in separating floors it will absorb some airborne noise (e.g. talking or music noise) and will reduce reverberation within the cavity.

Cutting and Storing Pavaflex

Pavaflex is easily cut with a Pavatex insulation knife. A bandsaw can also be used and this method is almost dust-free but the small saw table and narrow width of cut may be limiting factors. A hand-held circular saw is also suitable for cutting Pavaflex but it is recommended to wear a dust mask for protection when cutting the insulation batts. Pavaflex will not irritate normal skin though unlike many popular man-made flexible insulation products and so protective clothing is not required when fitting the insulation. Keep the boards dry when in storage and protect from damage. Do not stack the pallets.

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