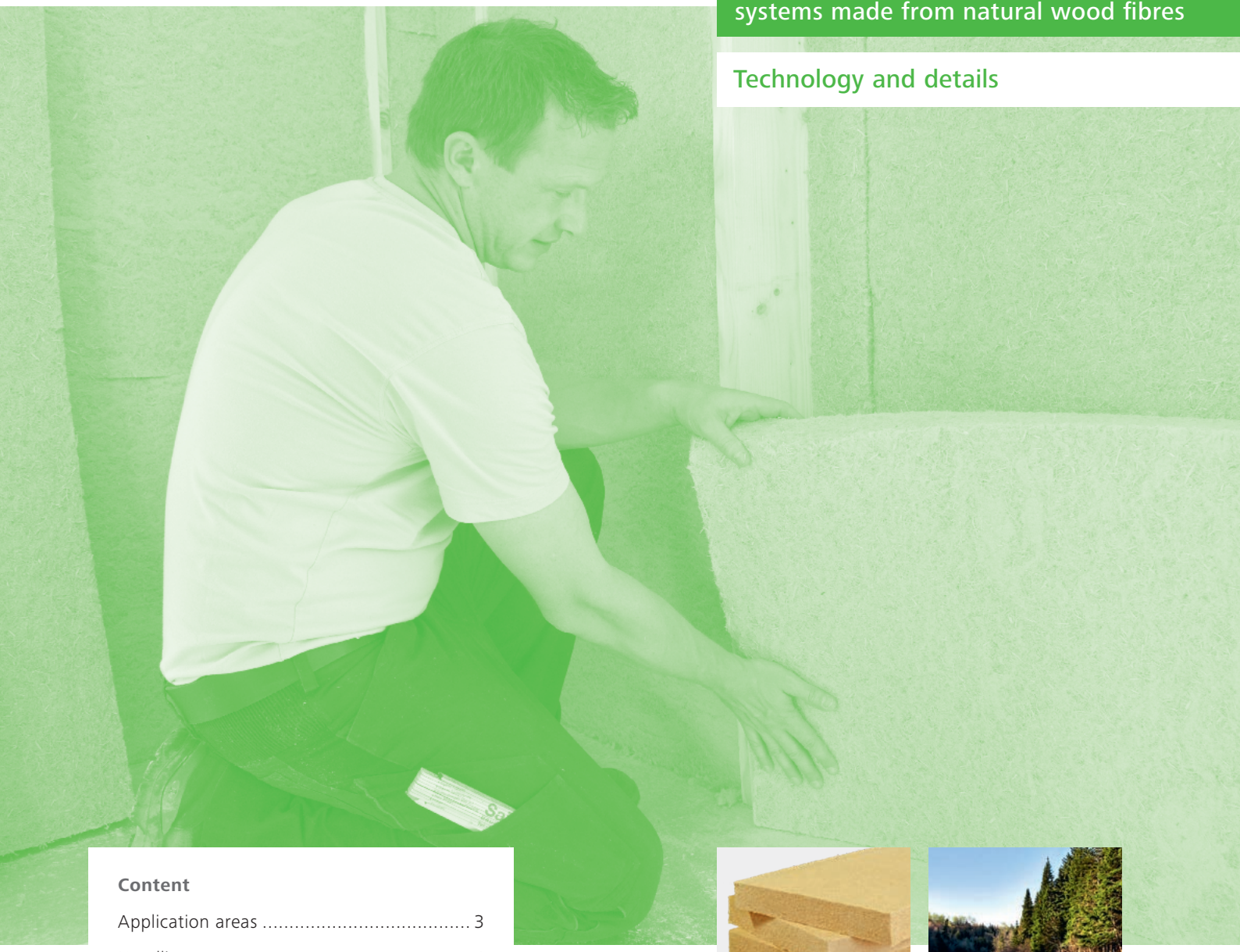
Instructions for use
STEICO*flex*

Environmentally friendly insulation systems made from natural wood fibres

Technology and details



Content

Application areas 3
Handling 4
Storage and transport 4
Sizes and cutting 5
General information 7

STEICO
engineered by nature

λ_D 0.036

STEICO*flex 036* has the lowest thermal conductivity of all natural insulating materials

STEICO*flex*

Better insulation, naturally.

STEICO*flex* insulation mats are made from natural softwood, which gives them all the benefits that wood offers as a natural construction material. STEICO*flex* is the ideal insulation for anyone wishing to combine high technology with building sustainably and protecting the climate.

STEICO uses only wood sourced responsibly through forestry certified by the PEFC® (Programme for the Endorsement of Forest Certification Schemes). It imposes stringent requirements on forestry businesses in terms of sustainability, environmentally friendly forest management, work quality and social responsibility. Furthermore, STEICO products bear the quality seal of the IBR (Institut für Baubiologie Rosenheim), which is a testament to their environmental credentials.

Application areas

STEICO*flex* – the flexible wood fibre insulation mat

The flexible and vapour-permeable wood fibre insulation mat is equally suited to cavities in roof, wall and ceiling structures and to cavity insulation in partition walls, facing formwork and installation levels.

STEICO*flex* is highly compressible. It is installed dry and will not resist compression. STEICO*flex* is produced and monitored in accordance with the EN 13171 standard.





Applications as per German standard DIN 4108-10:2015. National standards and regulations must be observed

DZ	Insulation between rafters; double-skin roof Uppermost floor not designed for floor traffic but accessible	
DI – zk	Internal insulation to ceiling (from below) or roof Insulation below rafters/load-bearing construction, suspended ceiling, etc	
WH	Insulation to timber-frame and timber-panel construction	
WI – zk	Internal insulation to wall	
WTR	Insulation to partitions	

Tensile strength: zk = none

Handling

Installing STEICO*flex* properly

When handling STEICO*flex* inside the building shell, you will need an airtight layer and a vapour barrier layer on the inside and a driving rain and wind seal on the outside (see also 'STEICO*multi* sealing system') product overview. The planner should verify that STEICO*flex* has been used correctly.

Cavities fitted with STEICO*flex* should be sealed after four weeks at the most to prevent damage to the insulation. STEICO*flex* must be protected from moisture at all times. If STEICO*flex* is installed in exterior structures during cold weather, it is important to fit the necessary vapour barrier and apply an airtight seal to it immediately after installation. This will prevent moisture from penetrating the thermal insulation and other structural layers from the interior.

In the case of variable-moisture vapour barrier sheets such as STEICO*multi renova*, vapour diffusion resistance will reduce at high relative humidity. This is particularly important to note when construction moisture (interior plastering, liquid screed) increases on building sites in winter.

Storage and transport

Dos and don'ts

- Do not remove transport packaging until the pallet is on solid and level ground
- Do not place anything on top of stored pallets
- Do not place any significant loads on insulation packaging when it is in storage or being transported
- Store STEICO*flex* in a dry place
- Retain pallet inserts and packing labels for your construction site records

Sizes and cutting

Sizes

Rectangle measuring 1,220 x 575 mm

The width of 575 mm is designed to suit the conventional timber-frame system spacing of 625 mm with wooden studs 60 mm wide.

Cutting

STEICO*flex* can be cut easily with an insulation knife, a reciprocating saw, a jigsaw or any power hand saw with two reciprocating serrated blades.

STEICO*flex* produces very little dust when handled and is gentle on skin.

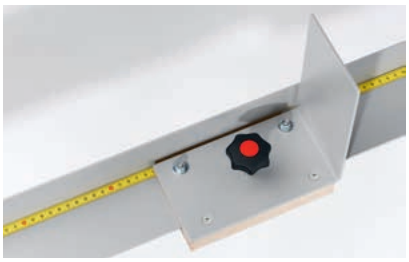
STEICO*isoflex cut combi* – the cutting table

In the case of frequent insulation work and to improve cutting precision, a power saw can be set up on a special cutting table: the STEICO*isoflex cut combi*. The precise positioning means that there is no need to keep calibrating the desired insulation width over and over again. The cutting operations are kept parallel, and it is possible to cut at precise angles.

The STEICO*isoflex cut combi* cutting table can easily be transported to the required location on standard castors, which makes it flexible and time-saving for on-site production of elements for walls, ceilings and roofs.
STEICO*isoflex cut combi* is available as part of our product range. Please ask your specialist dealer whether equipment is available for hire. See page 6 for other cutting equipment.

Safe handling

Cutting at precise angles



Accurate width settings

Cutting equipment

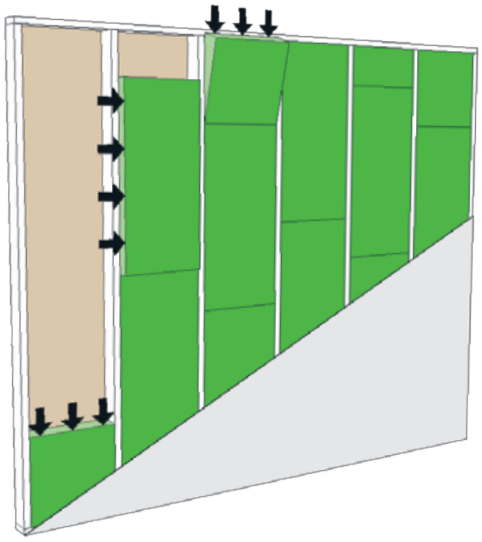
Cutting devices	Accessories	Notes
Bosch GFZ 16-35 AC 	TF 350 WM double serrated blade set	–
Dewalt DWE396, DWE397, DWE398, DWE399 	DT2979-QZ serrated blade set	–
Mafell DSS 300 cc wire insulation saw 	ST 1700 Vario saw workbench S 200 high-capacity extractor	Max. cutting depth: 300 mm Cutting depth of 140 mm when swivelled 60° Fibre extraction and vacuum cleaner recommended
Jigsaw 	Bosch T 1013 AWP jigsaw blade 	Good cutting quality up to an insulation thickness of 160 mm Vacuum cleaner recommended
	Bosch T 313 AW jigsaw blade 	Maximum insulation thickness: 100 mm Vacuum cleaner recommended
Festool 	ISC 240 EB cordless insulation saw (cutting set: SG-240 / W-ISC)	Max. cutting depth: 240 mm Larger cutting depths with cutting set SG-350/W-ISC
STEICO insulation knife 	–	Serrated knife for small surfaces and tidying up
BAHCO ProfCut PC-22-INS 		For small surfaces Max. cutting depth: 180 mm
Circular saw	Coarse saw blade	Vacuum cleaner recommended

Installation with oversize to assist friction fitting

STEICO*flex* is installed slightly longer and wider than it needs to be. This ensures that STEICO*flex* can be friction-fitted in the cavity. The oversize to assist friction fitting in the cavity measures approximately 10 mm. The wood fibre insulation mat clings snugly in place in the cavity and will retain its shape there permanently.

The oversize to assist friction fitting depends on the insulation thickness, the rafter spacing, the roughness of the rafters and the roof pitch.

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



The following maximum span widths can be applied to the horizontal ceiling area:

Insulation thickness [mm]	Maximum span width [mm]
40	450
50	475
60	500
80	550
100	600
120	650
140	700
160	750
180	800
200	850
220	850
240	850

Greater widths are possible for installation at inclines and in walls. STEICO*flex* wood fibre insulation mats fitted horizontally need to be secured to prevent them from falling out immediately after installation.

Suitable action should be taken to surround the edges of the cavities at storey height – 3.5 metres at most.

It is possible to fill large gaps by laying the mats on their sides. To avoid waste, you can take the remainder of a mat and push it into the cavity together with a new mat.
= CONTINUOUS INSTALLATION

General information

Safety

Cutting and handling the flexible STEICO*flex* wood fibre insulation mats will produce dust. You should wear a commercially available dust mask when working overhead with STEICO*flex*. Observe all national regulations regarding working with wood dust.

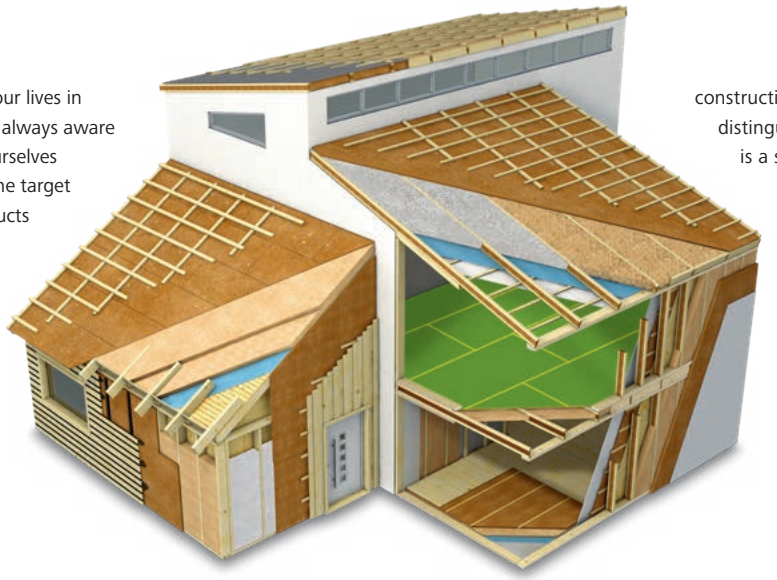
Maximum temperatures

Installed elements such as ceiling spotlights with surface temperatures of more than 100 °C must not come into direct contact with STEICO*flex*. It may be necessary to enclose fittings.

Disposal

STEICO*flex* bears German waste codes 030105 and 170201, meaning that it is to be disposed of in the same way as wood and timber products. Observe all national regulations regarding disposal.

We spend approx. 80 % of our lives in enclosed rooms. But are we always aware what we are surrounding ourselves with? STEICO has set itself the target of developing building products which consider the needs of both man and nature. Our products are therefore produced using sustainable natural materials. They help reduce energy use and add considerably to a natural healthy internal climate. STEICO insulation and construction materials, carry a number of distinguished 'seals of approval' which is a sign of high quality, healthy and functional building products. The raw materials used in STEICO products are certified by PEFC (Programme for the Endorsement of Forest Certification), ensuring a traceable and fully sustainable usage of the raw materials. STEICO, the number 1 choice for your sustainable building solutions.



Natural insulation and construction systems for new builds and renovations – roof, ceiling, wall and floor

- Renewable raw materials without harmful additives
- Excellent cold protection in winter
- Excellent summer heat protection
- Energy saving and increased property worth
- Weather tight and breathable
- Excellent fire protection
- Excellent sound protection
- Environmentally friendly and recyclable
- Light and easy to handle
- Insulation for healthy living
- Strong quality control
- Compatible insulation and structural building systems

CE

PEFC PEFC/04-31-2550 Promoting Sustainable Forest Management www.pefc.org

CERTIFIED COMPONENT Passive House Institute

STRUCTURAL TIMBER ASSOCIATION Building solutions in timber

Passivhaus Trust MEMBER

TIMBER DEVELOPMENT UK MEMBER

Quality Management ISO 9001:2015

Environmental Management ISO 14001:2015

engineered by nature

Your STEICO Partner

www.steico.com