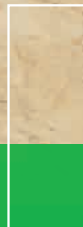


Environmentally friendly insulation system made from natural wood fibres

## Wood fibre

With all the advantages of natural wood: Durability, stability and excellent thermal insulation properties



## Environmentally-friendly insulation system made from natural wood fibres



### Areas of application

For all closed cavities in roofs, walls and ceilings



- Joint free insulation
- Very good thermal insulation and thermal storage capacity
- Excellent summer heat protection
- Water vapour open for a healthy internal climate
- Particularly slump resistant due to interlocking wood fibres
- No additional on-site cutting
- High quality through trained installers
- Sound and fire certificates available
- Recyclable like wood



## Variable format and joint-free

### STEICOzell insulates with pure wood fibres

All cavities are completely filled. Each of the wood fibres carries within it the concentrated benefits of natural wood: Durability, stability and excellent thermal insulation properties

### Insulation material with endless possibilities

To create the insulation layer, the fibre material is blown into the closed compartments under high pressure, where it adapts precisely to the boundary surfaces. This makes STEICOzell suitable both as an insulating material for industrial prefabrication (e.g. of complete wall elements) and for renovation work.

When insulating with STEICOzell, it is of no importance whether or not the compartments match common insulation material sizes. Even services within in the compartments are precisely enclosed during filling without the need for tedious

manual work. This allows homogeneous and joint-free filling even in the most complicated constructions. In addition to blown-in insulation, STEICOzell can also be used for attics in pitched roofs. This method is used when STEICOzell is applied as an exposed thermal insulation material on horizontal, curved or moderately inclined surfaces between trusses or beams of roof trusses. Regardless of whether it is a new building, an old building, a half-timbered building or a wooden building – STEICOzell offers particularly cost-effective and environmentally friendly insulation.





STEICOzell insulates with pure wood fibres

## Fast processing and lasting safety

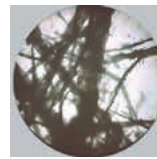
STEICOzell is only installed by trained partners and licensed companies (in accordance with building authority approval). Factory training and monitoring by the MPA NRW (North Rhine-Westphalia Materials Testing Office) make sure that planners and builders enjoy permanently high quality – in production and processing.

STEICOzell is delivered compressed and packed in bags. The compressed fibre material is prepared in special blowing machines and blown through flexible pipes to the point of use. The advantage: The machine as well as the insulating material can be stored outside the building, so that rapid work is guaranteed even in confined spaces.

There is no waste material with STEICOzell. Sweepings etc. can be reused. STEICOzell can be reused even after many years if installed properly. STEICOzell also offers advantages

when it comes to recycling, because it can be treated like natural wood. This distinguishes STEICOzell from many conventional insulating materials, the disposal of which must comply with strict health and safety regulations and sometimes incurs high costs.

### Settlement safety



In order to provide consistent insulation performance over decades, it is important that the insulation material retains its shape and volume. When STEICOzell is blown in, the individual wood fibres interlock three-dimensionally (microscope image). Even with low bulk densities, this guarantees the highest degree of settlement resistance with high elasticity.

## Pleasant indoor climate – all year round

STEICOzell is sorption-capable (moisture buffering) and diffusion-open (water vapour permeable). In this way, the insulation contributes to an optimized organic indoor climate. Due to its high heat storage capacity, STEICOzell also prevents

summer heat from entering the building. The effect: pleasant coolness on the hottest days, cosy warmth in the deepest winter.

## Ecology and climate protection



The wood for all STEICO wood fibre insulating materials comes from sustainable forestry that meets the strict requirements of the FSC® (Forest

Stewardship Council®). The aim of the FSC® is to promote environmentally responsible, socially acceptable and economically viable forest management. Only as many trees are removed from the forest as will grow back.

### Wood – a raw and construction material

The raw material for STEICOzell is exclusively fresh thinning and sawmill residue from our surrounding pine forests. Constant monitoring of the ingredients during production and ongoing third-party monitoring means that STEICO products are certified as emission-free and thus as construction products that do not pose a health risk.



**Building and insulating with wood is a simple but very effective measure for climate protection:**



During photosynthesis, trees split CO<sub>2</sub>, release the oxygen into the atmosphere and the carbon is bound in the wood. Using wood or wood-based materials in construction work helps to reduce levels of CO<sub>2</sub> in the atmosphere. For example, for STEICOzell, 63 kg of CO<sub>2</sub> is extracted from the atmosphere per cubic metre.



### Delivery forms STEICOzell

Weight/pieces [kg]	Quantity/pallet [pieces]
15 <sup>a)</sup>	21 bags
270 <sup>b)</sup>	1 big bale (18 bales of 15 kg each)

### Technical data STEICOzell

Approval for loose wood fibre as thermal insulation	
European technical assessment	12/0011
Fire class according to EN 13501-1	E
Fire classification by technical laboratory ITB (EN13501-1+A1:2010) (test certificate 02039/18/Z00NZP)	B-s2,d0
Declared thermal conductivity $\lambda_D$ [W/(m*K)]	0,038
Recommended density $\rho$ [kg/m <sup>3</sup> ]	
• Open blown: attic floor	approx. 32
• Closed cavities: roof, ceiling, wall	approx. 35 - 45
Flow resistance $r$ [kPa*s/m <sup>2</sup> ] n. DIN EN 29053 30 kg/m <sup>3</sup>	>5
Water vapour diffusion resistance value $\mu$	1/3
Specific heat capacity $c$ [J/(kg*K)]	2.100
Ingredients	wood fibres, flame retardant ammonium sulphate
Waste code (EAK)	170201, disposal like wood and engineered wood products

When calculating the thermal resistance of components during open blow-in, the following applies: Installation thickness = nominal thickness + 20 %.

**Note:** Store in a dry place. Do not remove the transport packaging until the pallet is standing on a firm, level and dry surface. Observe processing guidelines.

Settlement resistance depends on the injected quantity according to the compaction table as well as the uniform distribution of STEICOzell in the cavity.

For prefabricated components and subsequent transport, 7 kg/m<sup>3</sup> of material must be added.

### Minimum raw density table STEICOzell

Insulation thickness				
	[kg/m <sup>3</sup> ]			
≤ 16 cm				
≤ 22 cm				
≤ 28 cm	32	35	35	35
≤ 34 cm				
≤ 40 cm				

### International applicability

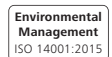
Please note: This is a courtesy translation of the German construction guide. Special national regulations may apply and have to be observed if necessary.

Tip for pre-measuring the amount of material: 40 kg/m<sup>3</sup> or 2,5 - 3,0 bags/m<sup>3</sup>.



allows Moisture Control Design compliant with

- ✓ EN 15026
- ✓ ASHRAE 160
- ✓ DIN 4108



a) Pallet format: approx. 0.80\*1.20\*2.60m; 33 pal./truck  
 b) Pallet format: approx. 0.80\*1.20\*2.30m; 33 pal./truck



Your STEICO Partner

www.steico.com