

CELLULOSE INSULATION MADE-TO-LAST

NOTHING IS OLDER THAN THE
NEWS IN YESTERDAY'S PAPER.

...yet, the insulation material made from these newspapers doesn't seem to age any further.

In autumn 2022 the timber construction company, Doppler & Spannring, added a storey to a residential house in Inzell, Bavaria. The building had been insulated in 2005 with ISOCELL Cellulose Insulation.

The cellulose was suctioned off and re-used in the new roof. Besides its high thermal value, cellulose from ISOCELL scores highly due to its perfect fit and its settling behaviour. Back in 2013 the dismantling of a prefabricated house in the show house village 'Blaue Lagune' in Neudorf, Vienna, was impressive proof of the reliability and durability of the insulation material: the cellulose showed no signs of sagging or deformation and even after more than two decades appeared as 'freshly blown in'. In spring 2014 the same picture emerged in a loft conversion at a house in Tyrol that had been insulated 17 years earlier.



BLOW-IN DENSITY CUSTOMISED TO STRUCTURAL ELEMENT

Gabriele Leibetseder, technical manager of ISOCELL:

„Critics repeatedly claim that cellulose would settle over time within the structural element, giving rise to gaps in the insulating layer - totally untrue as numerous investigations and tests now prove. Examples such as the 21-year-old show home or the roof opened up after 17 years give additional proof of durability from real cases.“

The quantity of material and the blowing density play a key role in insulation with cellulose. They depend on the construction and dimensions of the structural element to be insulated. The required density is determined using a so-called „shake test“. For this, reference elements are filled with cellulose, exposed to half an hour of severe vibrations on a vibrating plate and then opened. The decisive factor is that the blown-in material may not have settled. This provides the precise indicatory values for the on-site blower operator.

CELLULOSE – INTELLIGENT INSULATION FROM NEWSPAPER

Cellulose is an environmentally sustainable insulating material with a very low thermal conductivity ($\lambda_D = 0.039 \text{ W/mK}$) and it is extremely efficient and clean to work with. Cellulose is equally suitable for insulating roofs, walls or ceilings.

In principal the cellulose flakes are mechanically blown into existing or prepared hollow spaces where they felt together to form a non-settling, closely fitting, join-free insulation mat. This retains the heat in winter and keeps the heat out in the summer. The special blowing process ensures that the insulation penetrates even the remotest nooks and crannies without gaps. Cellulose insulation is reclaimed from sorted newspaper, which is shredded into a long-fibre flocks and treated with mineral salts to protect against vermin and mould. This treatment also makes it resistant to rotting and fire.

17
YEARS



Attic opened after 17 years (house in Tyrol); The ISOCELL cellulose looks like it's just been blown in.

21
YEARS



The prefabricated house is demolished after 21 years. (Lower Austria / Wr. Neustadt).



The cellulose installed as insulation in the exterior and partition walls showed no signs of settling or deformation.