

# Using sustainable insulation for your Green Star Rating

With the release of the Green Building Council of South Africa's certification for sustainable buildings, a number of progressive developers and architects are designing more sustainable buildings or even gunning for a Green Star Rating. Materials consumed or used in the building process is one of nine major categories of evaluation, hence increasing relevance for green building materials. Other significant categories, related directly or indirectly to the performance of materials, include emissions and energy.



Cellulose insulation that is made from recycled newsprint is environmentally friendly and biodegradable.



The user-friendly product is pumped into a ceiling by qualified sub-contractors.

At the recent GBCSA (Green Building Council of South Africa) Annual Convention, held in Cape Town, South Africa's Green Building Council announced significant progress in rolling out a Green Star Multi-Unit Residential rating tool, (scheduled for year-end in pilot form), and progress towards the Existing Buildings rating tool. The Existing Buildings tool is dependent on the adoption of a national energy benchmarking system as a first step.

## GREEN MATERIAL CHOICES FOR DESIGNERS

Energy performance, with the use of appropriate building materials, is critically important to the designer's range of green building choices. With this in mind, a South African thermal insulating material manufacturer and marketer has been promoting the use of a cellulose-based product, based on the following attributes, all of which will contribute significantly to a favourable rating of building projects – "designed" and "as built".

This brand – Eco-Insulation – has vigorously positioned itself at the forefront of thermal and acoustic insulation green performance:

- A low embodied-energy content is a key element in classifying building materials as sustainable or green.
- As a recycled building material, the product has a very low environmental impact and low embodied energy due to a low-energy manufacturing process.
- The thermal insulating property of the product, once installed, is excellent – considerably benefiting the energy performance of the whole building. In certain building designs, buildings have been observed to be up to 8 - 10 °C cooler under extreme summer conditions, and considerably warmer in winter.
- Eco-Insulation is made from 100% recycled newsprint.
- It is readily recycled when no longer needed in situ.
- The product is one of few insulating materials to be fully biodegradable. In cases where downcycling is the only choice, it can be put to use in a number of agricultural applications.
- Eco-Insulation is a zero-emission product. This is a major advantage over the various glass, plastic and composite offerings in the market.

Eco-Insulation founder Cecil Homan says that, in America, cellulose insulation competes on an equal footing with traditional glass-based insulation products due to the fact that it has excellent R-values and numerous advantages.


## IN CASE OF FIRE

It offers positive safety side-effects in cases of fire. Studies have shown that cellulose may actually protect a building from damage by fire because it is denser and limits the oxygen necessary to burn structural members. It also acts as a massive heat sink. Treated with an environmentally friendly, naturally occurring fire-retardant, Eco-Insulation is fire-tested and officially rated as B/B1/2, meaning no spread of flame.

## ACOUSTIC PROPERTIES

Noise reduction, another important characteristic, is achieved in a simple way. Firstly, cellulose fills cavities by nearly 100%, leaving few air pockets for sound to traverse. Secondly, cellulose materials are able to trap air within a much denser substrate, thus absorbing sound.

"Advertising a product as being "SABS-tested" does not mean that the product is approved under SABS codes. Only products carrying the SABS mark comply with the relevant standard," warns Homan. Eco-Insulation is approved under SABS 1381-6 and therefore displays the SABS mark.

Eco-Insulation agents are fully fledged sub-contractors and can be involved in both new and retrofitting projects and they are able to offer a full turnkey service. 

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