

Safe and Cosy

Insulation has been a talking point for some years, particularly with the focus on energy efficiency and green building practices highlighted by SANS 204. Now, as health issues gather increasing attention, insulation material is again coming under the spotlight.



Cecil Homan displaying his SA Energy Efficiency Association Award



Eco Insulation is made out of recycled newspaper - good for the environment and those who use it

Architect and Specifier" chats to Cecil Homan of Eco-Insulation about the impact that the new Consumer Protection Bill will have on the construction materials

Some 'eco' databases allow anyone in as long as they pay their subscriptions

industry. "The new Bill will give consumers the right to request full disclosure of the toxic nature of materials," he tells us.

Volatile Organic Compounds

Volatile Organic Compounds, or VOCs, are emitted by many commonly used materials, often without the knowledge of those who specify them. For example, formaldehyde, which is found in many of the resins and binders used in a number of insulation materials, is internationally recognised as a carcinogen.

"To understand the release of VOCs it is important to understand the nature of current insulating materials," he explains. "Many consist of composites made up of different materials, some synthetic – such as plastic – or glass. These need a binder to hold the material together. The binder and associated processing agents are often toxic.

"Certain common glass binders emit formaldehyde gas continuously over a long period of time until depleted. Often when we've removed old insulation from a building, we'll find that the binder has evaporated completely, leaving the glass fibres exposed. This material constitutes a health hazard and should not be handled without protection. Imagine the material getting into your eyes or your lungs?

"Currently the packaging warns consumers that the use of masks, gloves and goggles may be necessary but no elaboration is given as to why," he continues. "Enquiries under the new Bill could require a lot more detail from the manufacturer."

Ethical claims

The Bill will also ensure that suppliers live up to their marketing promises, Cecil explains further. "Some advertisements claim that materials have been SABS tested without specifying that the product has not, in fact, received SABS approval. It's not the same thing.

"Suppliers need to be ethical in their claims. There is a compliance issue which is a bit haphazard at the moment. Some 'eco' databases allow anyone in as long as they pay their subscriptions, allowing them to make anything sound green; it's a green compliance minefield out there. Volatile-emitting materials can be used as long as a minimum qualifying number of green boxes are ticked and the project qualifies by scoring above the required threshold. From a human safety (HSE) or occupancy perspective, this can be misleading," he emphasises.

Attention should also be given to the problem of approved materials being switched with cheap substitutes knowingly or unknowingly by contractors. Specifiers could be compelled to keep a close eye on the construction process to ensure that the materials they specify are actually being used, from

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Natural fibre options

Correctly processed natural materials are one solution, and numerous alternatives are available, including wool, which is common in Australia. Eco-Insulation has also blazed a trail locally with the company's cellulose-based product.

"Cellulose arising from recycled paper is a very viable option," Cecil assures us. "The manufacturing process is innocuous, and dust controlled. It is treated with a safe, flame-retardant, blow-in and packaged into recycled bags. Installation is as simple as pumping it into the attic space above the ceiling with a large pipe which is fed through an access point into the roof. While it's necessary to use the services of professional contractors, it's safe and non-invasive insulation with no waste. Our product is both SABS-approved and fire-rated.

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"Cellulose is non-toxic because it's a natural fibre upcycled from newspaper waste," he adds. "The material is collected in a manner that stimulates recycling, which has far-reaching social and environmental benefits. Isn't this the ultimate green?"

He adds that cellulose insulation has the additional benefit of being a sound



The material is packed into recycled bags absorber. "I used it in my own home," he tells us. "The first thing I noticed was how much quieter the house became."

Price tags

While some express concerns that natural fibre products come with a higher price tag, Cecil believes that the difference should be negligible. "Our raw materials are recycled. In addition, the embodied energy values of cellulose insulation are much lower due to simple, mechanical processes of manufacture.

"For specifiers, the changing of the paradigm as to insulating materials is surely a much cheaper price to pay when weighed up against long term issues that could have a profound effect on community health," suggests Cecil.

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Eco Insulation was successfully used in the upgrade of the insulation system for St. Cyprians school in Cape Town