News from Kingspan

RIGID PHENOLIC WINS VOTE OF CONFIDENCE FROM MAJOR XCO2 GUIDE TO SUSTAINABLE INSULATION

Zero Ozone Depletion Potential (ODP) non-fibrous insulation has emerged from a major study as being amongst the most environmentally sustainable forms of insulation. Such products include rigid phenolic insulation.

The study focuses on how insulation choices can impact on environmental sustainability. It shows that in buildings, action to reduce fossil fuel energy use (particularly heating and electrical energy) is the most important environmental consideration, and shows that the most important criteria for choosing insulation are those of long-term performance and Ozone Depletion Potential.

“Insulation for Sustainability - A Guide” is the result of a comprehensive research program carried out by widely respected sustainable construction consultants, XCO2 consibee Ltd.

The report argues that there are three main threats to environmental sustainability:

- Global warming (climate change driven by man-made emissions of gases);
- Resource depletion (including depletion of non-renewal resources); and

- Eco-toxic pollution including ozone depletion (damage to renewal resources and ecosystems).

It goes on to show that the extraction and use of fossil fuels, which is the primary source of man-made carbon dioxide, also causes the majority of eco-toxic pollution, and is the prime resource depletion issue.

The study highlights the need to reduce heating energy, which in European buildings accounts for 40-60% of their energy use, and stresses this can only be achieved by specifying high levels of insulation as well as good design. It also points out that, while different insulation materials achieve the same theoretical performance with varying thicknesses, the key concern is that the material will last a long time and retain a high level of performance throughout its life.

The study compares the performance of mineral fibres (such as rock wool and glass fibre), zero ODP cellular plastics (such as rigid phenolic insulation) and plant / animal fibres (such as cellulose and sheep's wool). On the issue of longevity, it assesses the impact of thermal performance of:

- Vapour permeability
- Physical degradation
- Moisture / condensation; and
- Air movement

The study found that moisture / condensation and air movement were possible design issues in respect of mineral fibre and that vapour permeability, physical degradation and moisture condensation were possible design issues in respect of plant / animal fibre based products. However, cellular plastic was found to be at low risk in all four categories.

This groundbreaking report is being distributed in the UK by BING member companies, one of which is Kingspan Insulation Ltd.

Kingspan's Marketing Manager, John Garbutt, said: "This Guide makes an extremely useful contribution to the debate on how designers should utilise

building materials, and in particular, insulation, in order to achieve greater levels of energy efficiency and thus prevent further damage to our environment.

“We are delighted that this exhaustive study into the subject of insulation and sustainability, confirms that zero ODP rigid phenolic insulation products such as those developed and manufactured by Kingspan Insulation offer one of the most sustainable solutions to insulation specifiers.”