

The Right Insulation Matters!



Insulation is one of the most cost effective ways of protecting our fragile environment. With the right insulation, buildings are more energy efficient which leads to reduced greenhouse gas emissions.

The Insulation Council of Australia & New Zealand (ICANZ) is the new name for FARIMA. ICANZ has been established to ensure that consumers and professionals alike, have access to information regarding

sustainability plus the latest research, product standards and regulations concerning glasswool and rockwool, Australia and New Zealand's most popular insulation products.

We serve as your central source of information on insulation matters to help make the choice easier and to ensure it performs to the levels you demand.

For more information visit our website at: www.icanz.com.au.



Demonstration of compliance to the BCA & AS/ NZS 4859.1

The Insulation Council of Australia and New Zealand (ICANZ) has been proud to sponsor the past two National AIBS Conferences.

In conjunction with the Australian Glass and Glazing Association (AGGA), ICANZ is currently presenting the fundamentals of insulation compliance in the national AIBS seminars currently underway.

ICANZ will be represented again in the upcoming edition of the TABS magazine.

ICANZ would be pleased to receive any feedback on this information, including members experiences at the seminars.

We are also investigating whether we can tailor an "Insulation Checklist" one-pager to your members specific needs to help the certification process.

This may include 'what-documents-to-look-for' and typical insulation thicknesses and answers to FAQ's.

If you have any specific suggestions on what is currently lacking, please let me know.

With the introduction of Energy Efficiency provisions in the BCA, the insulation of Class 1 buildings is now mandatory.

Class 2 to 4 provisions will be implemented in

May 2005 and Class 5 to 9 in May 2006, both with mandatory insulation levels.

The following is a summary of the requirements of AS/NZS 4859.1 'Materials for the thermal insulation of buildings', as called up by the BCA.

Bulk and Reflective Insulation - Demonstration of Compliance to BCA and AS/NZS 4859.1.

All bulk insulation shall have an R-value test certificate from a recognised laboratory.

All reflective insulation shall have a calculated R-value calculation ENDORSED by a recognised laboratory.

In both cases, thermal performance cannot be left in the hands of manufacturers (and their trade associations) and must be endorsed by a recognised testing laboratory as per the standard.

COMPLIANCE

To date there has been confusion regarding a method for demonstrating compliance to the AS/NZS 4859.1.

This has been a topic of many meetings involving the ABCB, AGO, AAC & Standards Australia where support for finalisation of a definitive answer to this question has been posed.

After much consultation, and some additional fundamental review of existing research, the question, "How is Compliance Demonstrated?", has been solved.

The following is a brief review of the thermal performance of insulation (both bulk and reflective), highlighting large discrepancies between labelled and actual R-value performance in both product groups.

With the regulation of mandatory insulation levels, these are now being addressed to provide regulators, specifiers and consumers a level of confidence that products will achieve their stated levels of thermal performance and that the benefits of energy efficiency can be achieved.

BULK INSULATION

From the 1st of May 2005, all bulk insulation shall comply with the requirements of AS/NZS 4859.1, as called up by the BCA.

This involves testing by a recognised laboratory (eg. NATA accredited).

In the lead up to this deadline, an AGO study into the R-value performance of bulk insulation has publically revealed information that been known within the industry for a number of years.

A brief outline of the findings have been published in a recent AGO communication to bulk insulation manufacturers.

" 25 tests were conducted on 24 samples of insulation from 9 suppliers by BRANZ Pty Ltd."

BRANZ obtained various insulation types from retail outlets, took samples and conducted R-value tests in their Wellington New Zealand laboratory in accordance with the standard.

The tests overall showed that actual performance varied from +9% to -46% of the R-value stated on the label: 3 test results were in the range 0% to +9% of the stated R-value, 7 were in the range 0 to -10%, 3 were in the range -11% to -20% and 9 were greater than -20%.

“ 3 samples did not have an R-value on the label.”

All non-compliant products were produced by polyester manufacturers.

“The test results produced by BRANZ raise some important issues and present some significant challenges to the industry, and other important stakeholders including consumers and government. These include the following:

1. It appears from the test results that a significant number of manufacturers and suppliers of insulation products are not meeting the required standards under the BCA. This means that buildings using these products may be non-compliant with the BCA, but also they will not achieve the energy efficiency levels which the Australian Government is seeking. The AGO is concerned that any potential shortfall in actual insulation performance will impact on potential energy savings and consequent reduction in greenhouse emissions that should be achieved as a result of the Energy Provisions for domestic construction introduced into the BCA.
2. As an agency of the Australian Government, AGO is concerned that consumers obtain insulation products that comply building regulations and consumer protection laws.
3. Related to point 2, the industry may need to consider whether the sometimes significant disparities between labeling information and the actual R values

of the products revealed by the test results warrant a consideration of any implications under the Trade Practices Act 1974, and in particular, section 52 of that Act.

4. There has traditionally not been a single industry body which is able to encourage a nationally consistent approach on issues such as testing and certification of insulation products. The AGO recognizes that the testing program undertaken to date may have critics, and in that context, acceptance by the industry of a testing program would be both a challenge and a benefit to all stakeholders including the industry.

REFLECTIVE INSULATION

To briefly recap the issue.

- The performance of reflective insulation is determined by calculation. This is based on,
 - the measured emissivity of the surfaces, &
 - the application (eg. brick veneer wall, metal roof).
- The Total R-value achieved is dependent on “the assumptions” used to perform the calculation (eg. rate of ventilation & dust affecting the emissivity of the surface).
- As you may well appreciate, the choice of assumptions used in the calculation of greatly affects the performance of the product.
- Different assumptions lead to the proliferation of a number of vastly different Total R-values for nominally identical product/application combinations.
- Product quality assurance systems offered by a number of quality assurance providers DO NOT address insulation product performance as required by the Standard and the BCA.

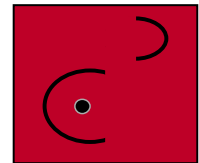
While manufacturers continue to disagree on a Standard Set of Assumptions, any manufacturer can meet the requirements of the BCA and AS/NZS 4859.1 by having their calculations endorsed by a recognised testing laboratory (e.g. NATA registered for thermal testing).

I re-iterate, thermal performance cannot be left in the hands of manufacturers (and their trade associations) and must be endorsed by a recognised testing laboratory as per the standard.

INFORMATION SESSIONS

Through a network of major building industry associations, additional information and/or training sessions, tailored to your constituents can be provided on the issue of energy efficiency and regulatory compliance.

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