



Bradford™  
for smarter environments

# SUSTAINABILITY



**CSR**



CSR Bradford Insulation has been manufacturing energy saving insulation in Australia since 1934. With extensive operations across the Asia Pacific, Bradford Insulation is a world renowned leader in the insulation industry with a long involvement in providing energy efficiency solutions.

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Bradford Insulation supports sustainability in three key ways:

1. Improving the living and working environment through greater thermal and acoustic comfort
2. Saving energy and reducing the associated greenhouse gas emissions
3. Reducing waste through environmentally sound manufacturing

## Energy Efficiency

A building that is thermally efficient reduces the amount of energy required to maintain a comfortable living/working environment. Glasswool and rockwool insulation products can save 12 times as much energy, during their first year in place, as the energy used to produce them<sup>1</sup>. Over the lifetime of the products this can amount to a saving of hundreds of times the energy used to make them.

Reducing energy consumption means less fossil fuel is burned to produce that energy, resulting in less pollution and lower greenhouse gas emissions.

Insulation has a major part to play in the fight against climate change. A recent McKinsey report identifies insulation as the most cost effective way to address greenhouse gas abatement<sup>2</sup>.

Insulating Australia's 2.7million uninsulated homes could deliver immediate reductions in greenhouse gas emissions equivalent to taking over half a million cars off the road<sup>3</sup>.

## Efficient Manufacturing Processes

Bradford Insulation operates world class manufacturing facilities. We continually strive to improve our manufacturing efficiency, reduce energy consumption, eliminate waste and minimise our impact on the environment.

Our Ingleburn glasswool insulation plant utilises the best available technology to reduce air emissions to levels that are among the lowest in the world for glasswool production.

Our glasswool and rockwool plants recycle all water used in the manufacturing process.



As part of our long term goal of zero waste manufacturing processes, our glasswool and rockwool plants recycle all water used in the manufacturing process, reducing water consumption and eliminating waste water effluent discharges.

## Recycled Content

Bradford Insulation glasswool is manufactured from a minimum of 50%, and up to 80%, recycled glass. Much of this glass is not suitable for recycling in flat or container glass manufacture. Bradford Insulation rockwool is manufactured from up to 20% blast furnace slag – a waste product of the iron and steel-making industry.

Using recycled glass and blast furnace slag not only reduces demand on virgin resources, it also saves landfill space by diverting materials from the solid waste stream. As an added benefit, it also reduces the amount of energy used – and greenhouse gases emitted – during the manufacturing process.

## Use and Re-use

Bradford Insulation glasswool and rockwool will, if left undisturbed, perform for the life of the building or installation. Most forms can easily be removed and reinstalled, saving costs, resources and energy in building expansions or renovations.

CSR Bradford Insulation has recently developed an innovative process to efficiently recycle rockwool scrap generated in the manufacturing process and will soon be able to receive rockwool demolition waste for recycling into new rockwool insulation products.

Bradford Insulation also supplies cut-to-size products that minimise waste on site.

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## Packaging and Transport

Bradford Insulation glasswool insulation is packed in a highly compressed state. This means that more insulation can be shipped in each truck, reducing the energy required for transport.

Bradford Insulation uses recyclable polyethylene packaging. Where collection facilities exist this versatile material can easily be recycled into new polyethylene products such as builders film.

## Fire and Corrosion Resistance

CSR Bradford Insulation glasswool and rockwool are naturally fire resistant and remain so for the life of the product. It is not necessary to add additional fire retardant chemicals. Non-combustible rockwool and glasswool products comply with AS1530.1 Combustibility Test for Materials and have the lowest toxicity category of off-gases during fire.

Glasswool and rockwool insulation products are also inert and have good corrosion resistance. Bradford Insulation glasswool and rockwool products have a pH that is slightly alkaline and will not corrode steel.



## Ozone Depleting Potential

Bradford Insulation has undertaken an audit of our glasswool, rockwool and reflective foil laminate insulation manufacturing processes referencing the US EPA List of Ozone Depleting Substances (Class 1 and Class 2). To the best of our knowledge, no ozone depleting substances are involved in either the manufacture or composition of these products.

Bradford Insulation's glasswool, rockwool and reflective foil laminates have an Ozone Depleting Potential of zero.

## Occupational Health & Safety

Glasswool and rockwool insulation products have been in worldwide use for over 70 years. During that time their manufacture and use have been extensively monitored and researched. No serious health effects have been found to have occurred in those manufacturing, using or otherwise exposed to glasswool and rockwool insulation.

Glasswool and rockwool insulation were reclassified in 2001 to be 'not classifiable as carcinogenic to humans' by the International Agency for Research on Cancer (IARC).

No evidence of fibre release or chemical off gassing from binding agents is detectable once installed.

Bradford is the only accepted insulation partner of the National Asthma Council Australia Sensitive Choice program. Bradford Gold insulation is suitable for use in the homes of asthma and allergy sufferers.

Bradford Insulation began manufacturing FBS-1 Bio-soluble glasswool and rockwool in 2001. They are not classified as hazardous.

## Further Information

If you require more information please refer to the Bradford Insulation Technical Manual or the Bradford Insulation website [www.bradfordinsulation.com.au](http://www.bradfordinsulation.com.au).

1. "Green and Competitive - The Energy, Environmental, and Economic Benefits of Fibre Glass and Mineral Wool Insulation Products", by Energy Conservation Management Inc.; The Alliance to Save Energy; and Barakat & Chamberlin, Inc., June 1996
2. A Cost Curve for Greenhouse Gas Reduction, Per-Anders Enkvist, Tomas Naucler and Jerker Rosander. 2007
3. Based on average annual saving in GHG emissions of 0.8T for a partially heated and cooled average home in Sydney (source Tony Isaacs Consulting Pty Ltd for ICANZ) and annual GHG emissions of 3.8T for a medium sized car travelling 15,000km (source carbonneutral.com.au)