

Bradford™
gold insulation

Bradford for smarter environments...

THAT'S GOLD



CSR

THE **SMARTEST** DECISION YOU'LL EVER MAKE

Australia has one of the harshest climates in the world so we want our homes to insulate us from the extremes of heat and cold. Without insulation homes can bake in summer as the external heat enters the house through the roof, walls and windows. By installing insulation, and coupling this with shading devices over windows, you can reduce the heat and minimise the need for air conditioning.

Similarly in winter a well insulated house reduces the need for heating as the warm air stays contained inside the home.

By reducing the need for air conditioning or heating we save money on our energy bills. This is important as energy costs increase year after year at a significantly higher rate than inflation. Minimising energy use also helps the environment given that most of the electricity in Australia is still generated from non-renewable natural resources.

THE SMART CHOICE IS GOLD

Choosing the right insulation is important. You need confidence that the product installed delivers on the performance that is promised. Whether building a new home or undertaking alterations or additions to existing homes, insulating walls and ceilings with Bradford Gold, Australia's leading insulation, will provide peace of mind to you and your family.

PLAY IT SMART WITH BRADFORD GOLD

- Made in Australia for Australians
- Made by Bradford, Australia's most respected insulation company for over 75 years
- Backed by CSR serving Australia for over 150 years
- The only insulation partner of Sensitive Choice® program refer to page 7 for details
- 70 year performance warranty
- Meets the highest Australian Insulation standards
- Non combustible*
- Environmentally sound, made from up to 65% recycled

Smart choice

Bradford Gold can stop up to 70% of all heat transfers in your home



*excludes high performance wall batts.



glass**HOW HEAT TRANSFER AFFECTS YOUR COMFORT**

Heat transfer occurs in three ways:

Radiation

Direct heat from the sun and hot surfaces. In summer, radiation from the sun heats up your roof and wall surfaces and this heat is radiated into your home.



Radiation

Convection

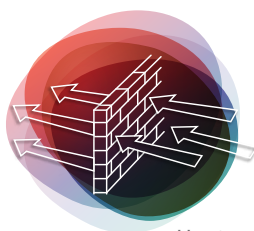
Warm air displacing cool air. In winter warm air rises and is replaced by cool air entering your home.



Warm Air

Conduction

Heat transferred through materials in your home. In summer materials with high thermal mass (concrete or bricks) will stay hot well into the night. This heat is then radiated to the surrounding air.



Heat

Most common building materials such as bricks, roof tiles and metal roofing allow most of the heat they receive to pass through them. This is why insulation is important to achieve a comfortable living environment.

In winter, around 42% of a home's heat is lost through the ceiling and 24% typically lost through the walls. In summer heat flows at similar rates into the home.

We have become accustomed to living in comfortable internal environments of between 18-25°C. A well insulated home with good passive solar design can achieve this in many parts of Australia with no air conditioning or heating for most of the year. When you do need to use these appliances, having a well insulated home allows you to achieve your comfort level by running them on lower settings or for shorter periods of time.



HOW BRADFORD GOLD INSULATION WORKS

Bradford Gold insulation is made from glass spun like fairy floss to create millions of air pockets which impede the flow of heat through the product.

The thicker or denser the insulation is, the more it resists the flow of heat through it. This resistance is measured by the R-value of the insulation. The higher the R-value, the better the insulation's performance.

Whilst some insulation materials can pack down or settle over time, Bradford Gold insulation is guaranteed to maintain its R-value for the life of the home (or 70 years).

BREATHE EASY

Many Australian families are concerned about the effects of our modern homes on allergy and asthma sufferers particularly young children.

Bradford is the only approved insulation partner of the National Asthma Council Australia's Sensitive Choice® program. Bradford Gold insulation is suitable for use in the homes of asthma and allergy sufferers. It also doesn't provide a food source for insects or vermin.



BEST POSSIBLE FIRE RATING – 4 ZERO

Bradford Gold insulation achieves the best fire rating when tested to AS1530.3. Zero result for ignitability, spread of flame, smoke developed and heat evolved. These are the best possible ratings.

Bradford Gold insulation will not burn and can hinder the spread of flame. Bradford Gold Ceiling and Wall* insulation is also classified as non combustible when tested to AS 1530.1.

Go green with Gold

GO GREEN WITH GOLD

Electricity generation in Australia is one of the main sources of greenhouse gas emissions and therefore contributes to global warming.

Reducing your consumption of energy for heating and cooling is a responsible, positive action which is environmentally sustainable.

Bradford Gold insulation is produced from up to 65% recycled glass helping to save energy in manufacture and reduce landfill.



*excludes high performance wall batts.



PERFORMANCE YOU CAN TRUST

Bradford Gold insulation is manufactured under ISO 9002 Quality Systems and complies with AS4859.1 'Materials for the Thermal Insulation of Buildings'.

Established in 1934, Bradford is Australia's most experienced domestic insulation company. This experience, combined with our world class manufacturing technology, is your guarantee of quality and performance, all backed by CSR, Australia's leading building materials company.



FRESH AIR SHOULD COME NATURALLY

A well ventilated roof space is an important and inexpensive way to maximise your comfort. Adding Edmonds roof ventilation removes the hot air in your roof space in summer and minimises the effects of damaging condensation.

In winter, moisture in the home can be a destructive force causing dry rot and reducing the effectiveness of insulation. Excessive moisture in the attic space can also damage plasterboard and encourage mould growth which can trigger asthma and allergies. Edmonds roof vents will help expel damp air to protect the integrity of the home providing peace of mind and health benefits for your family.

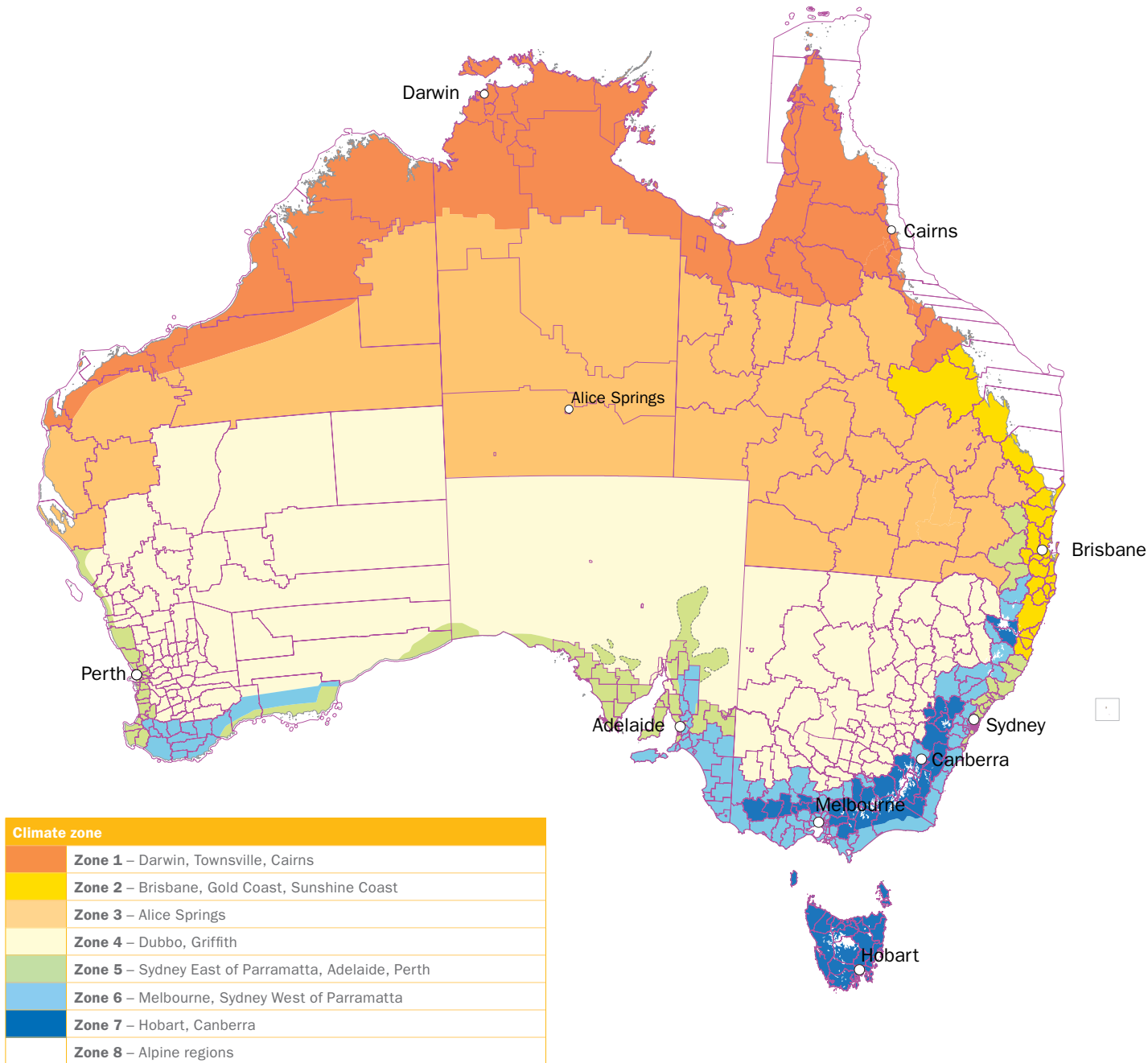


AUSTRALIA'S SMART CHOICE IS GOLD

WHAT R-VALUE IS BEST FOR YOUR HOME?

The Building Code of Australia (BCA) has outlined energy efficiency provisions for new homes which includes the inclusion of insulation in ceilings, walls and some floors. The value of insulation required to meet the deemed-to-satisfy provisions for energy efficiency are intended to be seen as a minimum standard – not best practice. The table on the following page outlines the Bradford Gold products that can be used to meet the 6 star standard in the various climate zones around Australia as shown below.

Note that other provisions within the BCA, such as a reduction in ceiling area insulated due to the installation of recessed down lights or other fixtures, may affect the level of insulation required. Similarly, to meet the deemed-to-satisfy provisions in the BCA other measures for energy efficiency, such as glazing requirements, must also be met.



The values in this table can also be used as a guide when installing insulation into alterations and additions, or retrofitting existing homes with no insulation.

MINIMUM R-VALUE OF INSULATION NEEDED TO MEET BCA DEEMED-TO-SATISFY REQUIREMENTS

Climate zone	1 & 2 < 300m	2 > 300m, 3, 4, 5, 6, 7	8
Ceilings			
Dark coloured roof tiles or metal roof (solar absorptance > 0.6) and no sarking	5.0	5.0	6.0
Dark coloured roof tiles (solar absorptance > 0.6) with ES Roof Tile sarking, with VENTS	3.5	5.0	6.0
Light coloured roof tiles or metal roof (solar absorptance between 0.4 – 0.6) and no sarking	5.0	4.1	6.0
Light coloured roof tiles (solar absorptance between 0.4 – 0.6) with ES Roof Tile sarking, with VENTS	3.0	4.1	6.0
Dark coloured metal roof (solar absorptance > 0.6) with ResiWrap sarking, with VENTS	3.5	4.1	6.0
Dark coloured metal roof (solar absorptance > 0.6) with Anticon 55, without VENTS	3.0	3.0	4.1
Light coloured metal roof (solar absorptance between 0.4 – 0.6) with ResiWrap sarking, with or without VENTS	3.5	4.1	6.0
Light or off white/cream coloured metal roof (solar absorptance ≤ 0.4) with Anticon 55, without VENTS	2.0	2.0	4.1
Off white/cream coloured metal roof (solar absorptance ≤ 0.4) and no sarking	4.1	3.5	6.0
Off white/ cream coloured metal roof (solar absorptance ≤ 0.4) with ResiWrap sarking, with or without VENTS	3.0	3.5	6.0
Walls			
90mm studs, brick veneer with enviroseal Proctorwrap*	2.5	2.5	2.5
90mm studs, lightweight cladding with enviroseal Proctorwrap*	2.7	2.7	**

* If metal framing is used, a thermal break tape must be used over the Proctor fabric.

** Contact Bradford for a solution.

Note that the use of high levels of insulation to meet energy efficiency and comfort requirements can lead to an increased incidence of condensation in walls and attic spaces in cold climates. This is because of the insulation's effectiveness at keeping the warmth within the home but vapour's ability to pass through plasterboard and standard insulation. To address potential condensation problems Bradford recommends the installation of Anticon roofing blanket under metal roofs where the ceiling is insulated. The inclusion of building membranes with a high permeability, such as enviroseal Proctorwrap, and the inclusions of roof ventilators will also help minimise the incidence of condensation. Contact Bradford Technical personnel for detailed information.

A RANGE TO SUIT EVERY HOME

There's a full range of Bradford Gold insulation to suit ceilings and walls of any home in Australia.

BRADFORD GOLD INSULATION TECHNICAL SPECIFICATIONS:

Product	R-value (m ² K/W)	Dimensions	Thickness	Product code
Bradford Gold for walls	R1.5	1160mm x 430mm	75mm	111727
	R1.5	1160mm x 580mm	75mm	111726
	R2.0	1160mm x 430mm	90mm	15250
	R2.0	1160mm x 580mm	90mm	15229
	R2.5	1160mm x 430mm	90mm	101728
	R2.5	1160mm x 580mm	90mm	101727
Bradford Gold High Performance for walls	R2.0	1160mm x 430mm	75mm	102284
	R2.0	1160mm x 580mm	75mm	102274
	R2.1	1160mm x 430mm	70mm	102281
	R2.1	1160mm x 580mm	70mm	102272
	R2.7	1160mm x 430mm	90mm	101737
	R2.7	1160mm x 580mm	90mm	101734
Bradford Gold for ceilings	R2.5	1160mm x 430mm	140mm	111720
	R2.5	1160mm x 580mm	140mm	111719
	R3.0	1160mm x 430mm	165mm	19177
	R3.0	1160mm x 580mm	165mm	111723
	R3.5	1160mm x 430mm	185mm	15241
	R3.5	1160mm x 580mm	185mm	41895
	R4.1	1160mm x 430mm	215mm	111716
	R4.1	1160mm x 580mm	215mm	111715
Bradford Gold High Performance for ceilings	R5.0	1160mm x 430mm	240mm	105417
	R5.0	1160mm x 580mm	240mm	105419
	R6.0	1160mm x 430mm	260mm	77871
	R6.0	1160mm x 580mm	260mm	77849

SAFE FORMULATION

Bradford Gold insulation is manufactured using the latest FBS-1 bio-soluble formulation which has been assessed as non-hazardous under the National Occupational Health & Safety Commission's guidelines.

For more information call **1300 850 305** or visit www.bradfordinsulation.com.au