

Designed for our environment





Designed for future living

Hebel® is helping to build the long-term future of Australian living with a commitment to products that are practical, versatile, environmentally preferable and durable enough to stand the test of time.

Hebel® is Australia's leading manufacturer of Autoclaved Aerated Concrete (AAC), an amazingly innovative building material that has been used in Europe for more than 60 years and in Australia for more than 17 years.

AAC is a lightweight concrete that is formed into blocks and panels for a wide range of loadbearing and non-loadbearing construction applications. It is manufactured from sand, cement, recycled material, lime, gypsum, aluminium paste and aerating agents. It is moulded, cut and steam pressure cured in an autoclave before being packed, ready for transport.

AAC delivers the benefits of traditional masonry such as strength, acoustics, fire and pest resistance and is installed faster, saving valuable construction time. It has a unique combination

of thermal mass and insulation providing a more comfortable living environment.

The core component of Hebel® Systems is a 75mm thick, steel mesh reinforced panel which is supplied in various lengths and profiles to suit wall, floor and fence requirements.

Hebel® has developed products and systems for all segments of the construction industry:

- New Detached Housing (Free standing homes)
- Alterations and Additions (Renovations and extensions)
- Low Rise Multi-Residential (Townhouses, villas, duplexes, seniors living)
- High Rise Multi-Residential (Apartments over 4 storeys)
- Commercial and Industrial (Warehouses, factories, shopping centres)
- Civil Sound Barriers (Freeway/ Road Noise walls)
- Outdoor/Indoor Living (DIY)



By choosing Hebel® you can feel good in the knowledge that you have chosen a building material that is better for our environment. The unique innovation that is Hebel® delivers a large number of key environmental benefits over comparable materials.

Independently assessed

To clarify these environmental benefits Hebel® has worked with Good Environmental Choice Australia (GECA) to conduct a life cycle assessment (LCA) to the international standard ISO 14 024 comparing Hebel® to other building products with the same application.

Life cycle assessment is the leading methodology used to quantify the environmental impacts over a product's entire life including; raw material extraction, production, during use and disposal at end the of the product life.

This independent assessment found that Hebel® has clear environmental benefits across all key environmental

criteria. These include global warming, acidification, heavy metal content, carcinogens, smog creation, cumulative energy demand, water use and solid waste generation. In many cases the environmental benefits were well over 60% better than comparable materials.

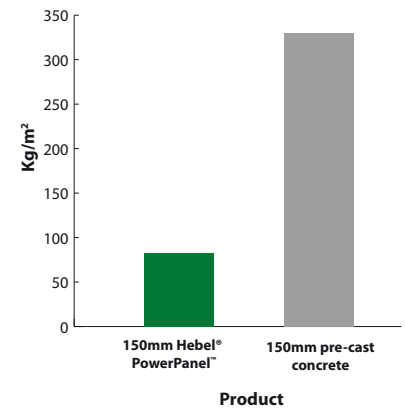
Hebel® is committed to providing a rounded and thorough picture of the environmental attributes of its products and as LCA methodologies and agreed standards change, Hebel® will continue to use independent environmental assessments to ensure comprehensive and credible information is presented to the market.

Raw materials

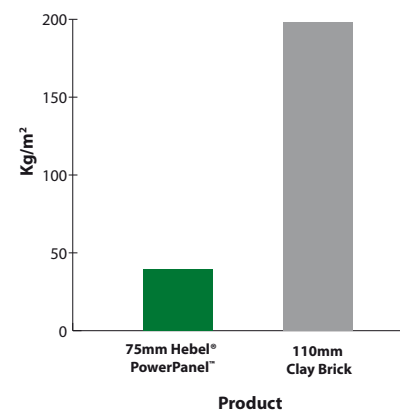
The low bulk density of Hebel® AAC means that less than a quarter of the resources and raw materials are used in its production than for other masonry products. All raw materials are sourced locally to minimise energy used in transport.

A better environment

Raw Material Usage Comparison



Raw Material Usage Comparison

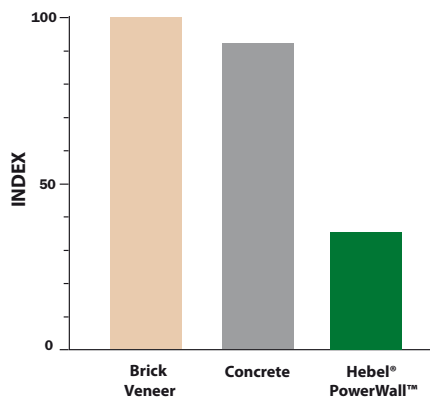


Between 4 and 5 times the m² of wall can be constructed from Hebel® products using the same quantity of raw materials when compared to concrete or conventional clay brick construction.

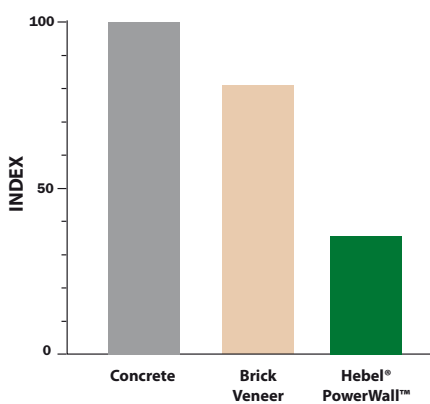


Photo courtesy of Barrush Homes

Embodied Energy*



Greenhouse Gas Emissions*



Production

The Hebel® production process is ecologically responsible with very little waste produced and we have a passion to reduce waste further through extensive recycling. Production waste, slurry and even the steam generated are recycled back into the manufacturing process while waste steel and oil are recycled off site. Even the non toxic citrus based solvents used for cleaning are recycled.

Embodied energy

Hebel® PowerWall™ uses over 60%* less embodied energy than comparative concrete and brick veneer wall systems.

Usage

The combination of modular panel sizes which are designed to suit standard building practices and the ease of working with standard power tools means there is very little waste on site during construction. This means less mess and less landfill

due to leftover building materials. We are also investigating the use of crushing machines to recycle the finished AAC back into the manufacturing process.

Hebel® products are non-toxic and don't emit any gases, another reason why they are an increasingly popular choice for people concerned with building a healthy, environmentally responsible home or building.

Carbon Footprint

CSR has undertaken a major exercise to measure the company's carbon footprint and to help develop additional comprehensive plans to minimise its environmental impact. While this process is underway, at Hebel® we have introduced more flexible working hours and encouraged staff to work from home to reduce days traveled to and from work from 5 to 1 or 2 a week, a practical measure to further reduce our carbon footprint.

*Source: LCA Report GECA 2006



Hebel® is proud to have been awarded the Good Environmental Choice Australia (GECA) Label for each of its products and systems.

To qualify for the GECA endorsement, Hebel® products and systems were assessed against the GECA 8-2005 Environmentally Innovative Products Standard. The assessment found Hebel® products and systems have significantly reduced environment loads, of at least 30% over their life-cycle, for the top three primary environmental impacts and in some cases the benefits were even stronger. In comparison to competitor products on the Australian market which serve the same functional purpose, around 50% less greenhouse gases and 50% less carcinogens were produced as verified by GECA.

Mr Petar Johnson, Chairman of GECA stated that “Hebel® products and systems have clear environmental performance benefits compared to most other widely used products in the construction industry in Australia. We expect to see a growing demand for this produce line as more architects, builders and construction firms grapple

with the environmental performance of their designs. Hebel® should be recognised as the leading wall, floor and sound barrier solution for Australia.”

The GECA label is a clear and credible guide for consumers who want to purchase products with lower environmental impacts and it is the only environmental labelling program in Australia that independently assesses the environmental performance of products from a life cycle perspective.

The Good Environmental Choice Label is based on an internationally agreed framework; ISO 14 024 requiring the establishment of detailed standards and on-site verification of compliance (www.geca.org.au).

The choice of one product over another on environmental grounds is becoming more and more critical. Hebel® asks you to consider the GECA Label and choose products with low environmental impacts so we can all contribute to a better environment.

Environmental Award for Hebel®



HEB - 2006
Environmentally Innovative Products



Hebel® and our environmental industry commitment

Hebel® understands a low footprint for our building materials is only one aspect of helping to reduce environmental loads. That is why in conjunction with other CSR divisions Hebel® is a member of the following Environmental organizations:

- Good Environmental Choice Australia
- Green Building Council of Australia
- HIA GreenSmart
- EcoSpecifier
- Habitat for Humanity

Hebel® is not only committed to promoting its own solutions for real reductions in greenhouse gas emissions but also supporting the industry to build in smarter and more energy efficient ways. Only through a collective effort can we reduce global warming through materials and designs that have a lower environmental load.

Energy efficient

The unique combination of thermal resistance and thermal mass make building with Hebel® a smart choice for meeting Australia's stringent building regulations.

The thermal performance of a building depends on a number of factors such as orientation and size and aspect of windows. The R-Value of walls and floors can significantly affect the energy-rating outcome of dwellings, a 75mm Hebel® panel has up to 5 times the R-Value of a 110mm house brick[#] and a 250mm Hebel® Block has 11 times the R-Value. The use of Hebel® in walls and floors will provide increased thermal performance that can allow more flexibility with other design aspects of a building.

The thermal efficiency of Hebel® systems will also reduce the reliance on heating and cooling appliances. The combined effects of running a heater less in winter and fans or air conditioning less in summer can have a big impact on energy costs and the environment.

[#]AIRAH Technical Handbook 2000



Tranquil spaces

Hebel® has worked closely with acoustic experts and testing authorities to develop systems that will provide superior sound insulation of interior and exterior walls and floors.

Noise is a particular problem in modern living, for residents of detached homes and multi-residential buildings and for people working in commercial buildings. Hebel® protects the peace and privacy of residents and workers by turning internal and external walls and floors into effective sound barriers.

With the sound insulation of Hebel®, residents don't have to worry about bothering other members of their household or the neighbours – and they needn't be annoyed by other people's noise.

In the multi-residential building industry, Hebel® is seen as a leader in building materials largely due to its success in combating the problem of noise traveling between apartments.

Space and style

As Hebel® wall systems are thinner than traditional masonry alternatives, they allow a greater internal living area for the same building dimensions and provide greater design flexibility.

Hebel® is an amazingly versatile building material, with a surface finish that gives you the opportunity to achieve your own creative effects with an infinite palette of colour and texture combinations.

Fire and pest resistance

Hebel® blocks and panels are inert and non-combustible and have been tested at CSIRO to achieve excellent fire ratings.

All Hebel® systems meet or exceed the stringent requirements of the latest Australian Standard AS 3959 - 2009 - Construction of buildings in bushfire-prone areas, across all 6 Bushfire Attack Levels (BAL) including BAL- FZ (Flamezone) for External Walls, Floors, Subfloor Supports, Decks and Verandahs.

Hebel® block homes provide frameless loadbearing walls and when constructed in accordance with the masonry code and Hebel's Block Design and Installation guides, comply with all 6 BAL requirements with a Fire Resistance Level (FRL) of 240/240/240 - far higher than the standards require. Hebel® PowerWall™ - which uses 75mm Hebel® steel-reinforced panels on a framed construction achieves an FRL of 240/180/180 - still exceeding the requirements even of BAL-FZ. In bushfire-prone areas, Hebel® can be invaluable as a fire-resistant barrier to ember storms, which often cause new fires.

Hebel® is not a food source for termites and when using our single skin solid block walls will not harbour other pests. There is no timber in the walls to feed termites and no cavity for vermin to live in.





Designing for future living

Hebel® is a quality building product, and is backed by CSR Building Products Limited. Further details on engineering and building with Hebel® systems are available in the Hebel® Design Guides and Technical Manual. To obtain a copy, or for further sales or technical assistance, please visit our website.

Hebel® Website:
hebelaustralia.com.au

For sales enquiries or further information, please telephone us from anywhere in Australia:

1300 369 448

Guarantee

Hebel® guarantees the products manufactured by itself and the systems described in Hebel® literature for 7 years, subject to the terms and conditions of the Hebel® Guarantee which can be inspected on the Hebel® website at hebelaustralia.com.au. Hebel® does not however guarantee the components, products or services, such as installation, supplied by others. Hebel® recommends that only products, components and systems recommended by it be used.


Health & Safety

Information on any known health risks of our products and how to handle them safely is on their packaging and/or the documentation accompanying them. Additional information is listed in the Material Safety Data Sheet (MSDS).

To obtain a copy of a MSDS, telephone 1800 807 668 or download from hebelaustralia.com.au. Contractors are required by law to perform their own risk assessments before undertaking work. Hebel® has sample Safe Work Method Statements (SWMS) to assist in this. To obtain a sample SWMS, refer also to the above sources.

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