

Futurecrete®

We need to Build Better





A lower carbon future shouldn't cost the earth.

Introducing Futurecrete®, Adbri's Low Carbon Concrete.

We need to build better to contribute to a safe, healthy and sustainable future for all Australians. Cement is a key ingredient in making concrete. Currently, cement production is responsible for 8% of global CO₂ emissions.¹ Due to its versatility, concrete is also the second most consumed material in the world.

Concrete builds our homes, schools, hospitals, infrastructure and industrial developments. Concrete is an essential material in the transition to a low carbon economy and critical to renewable energy assets including hydroelectricity and wind turbines. With the building and construction sector set to double by 2060, a reduction in the embodied carbon in concrete is likely to have a positive environmental impact when compared to conventional concrete.

Over 15 years ago, Adbri began innovating our products, using cement substitutes in our mixes. Through rigorous testing and product development, we developed a range of lower carbon concretes which reduces the embodied carbon in concrete mixes. Many of our customers have been building with Adbri's lower carbon concrete for over a decade, most without even realising it.

¹ Beyond Zero Emissions, Zero Carbon Industry Plan - Rethinking Cement, 2017 Report, [bze.org.au/wp-content/uploads/2020/12/rethinking-cement-bze-report-2017.pdf](https://www.bze.org.au/wp-content/uploads/2020/12/rethinking-cement-bze-report-2017.pdf).

Building a lower carbon Australia

At Adbri, our goal is to achieve net zero emissions by 2050. Our Birkenhead integrated clinker and cement manufacturing facility currently makes Australia's lowest embodied carbon Type GP cement as verified in a published Environmental Product Declaration (EPD).² Decarbonising our economy is a global challenge, and we know that doing things how they've always been done may not be the most sustainable approach.

Futurecrete[®] is our new range of lower carbon concretes.

The Futurecrete[®] range of lower embodied carbon concrete incorporates cement substitutes to reduce the embodied carbon in concrete. Futurecrete[®] Ultra results in further carbon reductions by substituting a higher percentage of cement with supplementary cementitious materials (SCMs). Manufactured in accordance with AS1379 and AS3600, our Futurecrete[®] concretes are suitable for a range of applications without compromising on strength and durability.

By using a lower carbon concrete it can result in an overall reduction in construction emissions, making it easier to meet your projects' sustainability needs. For example, South Australian manufactured Futurecrete[®] Ultra has up to 52% less embodied carbon compared to conventional concrete.³

To further enhance confidence and transparency, we have developed Environmental Product Declarations (EPDs) to provide independently verified information about the environmental impacts of our concrete products.

When using Futurecrete[®], you are choosing to build a lower carbon Australia.



² <https://www.adbri.com.au/wp-content/uploads/2022/11/2022-Adbri-Cement-Products-EPD-WebFinal.pdf> Valid from 15 October 2022.



Build Better

Futurecrete[®] has been developed to include recycled materials to reduce embodied carbon and support the circular economy. Achieve your projects' sustainability goals with Futurecrete[®] which:

Reduces the embodied carbon of concrete by up to 52% when compared to conventional concrete.³

Exceeds the performance requirements of AS1379 and AS3600, and is suitable for use in most typical concrete applications.⁴

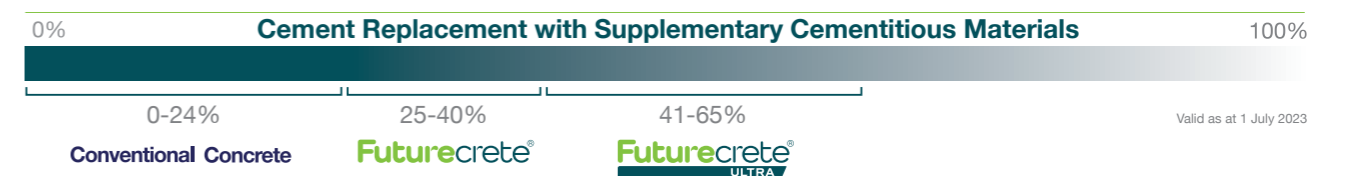
Is backed by our suite of independently verified concrete EPDs.

Can reduce the environmental impact of projects while maintaining the strength and durability of conventional concrete.

Can be customised to meet the unique needs of your project, supported by our in-house technical experts and bespoke, project-specific EPDs.

A lower carbon solution to suit your project

Build a lower carbon Australia and reduce your projects' environmental footprint with Futurecrete[®] and Futurecrete[®] Ultra lower carbon concretes. Substituting a higher percentage of cement with SCMs can reduce the embodied carbon without lowering strength when compared to conventional concrete.



³ Comparison between South Australian manufactured Futurecrete[®] Ultra 32MPa concrete and the Australian National Life Cycle Inventory Database (AusLCI) equivalent ready-mix concrete with no cement replacement.



Your choice. Our future.

Building our sustainable future

Through our Hy-Tec, Adbri Concrete, Central Premix and Zanows' concrete brands, we have been producing lower carbon concrete for over 15 years, rising to the challenge of innovating our products to reduce the embodied carbon while maintaining the strength and durability of conventional concrete.

We are also pioneers in the use of alternative fuels. Since 2002, at our Birkenhead integrated clinker and cement manufacturing facility we have used over 1.4 million tonnes of refuse derived fuel, diverting building and construction waste from landfill and creating lower carbon cement products.

Lowering carbon without lowering strength

There's a good reason why concrete is found in everything from our homes, hospitals and schools to our roads, rail and airports - its strength, versatility and durability are relied on to deliver for the most demanding projects.

Futurecrete® can be used in a wide range of project applications delivering equivalent performance to conventional concrete. In applications that require high early strength, such as post-tension and precast slabs, our experienced technical team can provide advice and bespoke designs to suit the needs of most projects.⁴

Technical support and capabilities

Our national technical team is supported by state-of-the-art laboratories to create a large range of products compliant with AS1379 and AS3600. Our Birkenhead laboratory is accredited by the National Association of Testing Authorities to cementitious, lime, concrete and aggregate test methods. We were the first Australasian laboratory to commission a robotic quality control cement testing facility which improves testing accuracy and efficiencies. Our technical team will work with you and support you in creating custom mixes to meet the performance and sustainability requirements of your project.

Made by a leading Australian company for Australia

Futurecrete® is an Australian brand, made and manufactured by Adbri, one of the country's pioneering construction materials and industrial mineral manufacturing companies. As a vertically integrated Australian business, we operate across large portions of our supply chain, supporting local jobs and reducing supply chain risks. Over 140 years of experience and understanding goes into the products and services we provide.

⁴ Futurecrete® is a range of premix concretes designed and manufactured in accordance with the performance requirements of AS1379 and AS3600, with lower embodied carbon, as compared to traditional ordinary Portland cement concrete. Futurecrete® is generally suitable for use across most residential, commercial and infrastructure projects. For non standard applications, professional advice on its suitability should be sought from a qualified structural engineer.

Yarra Trams Renewal Project

The Adbri technical team was engaged by Fulton Hogan to customise our 50MPa general purpose concrete mix to reduce its embodied carbon for the Tram Tracks Renewal project in Victoria. As the project owners, Yarra Trams considered a 25% cement substitution and other optimisation opportunities for both sustainability and performance benefits.

The Adbri team created a bespoke mix by replacing a portion of this cement with slag, a byproduct which can be used as an SCM. SCMs can lower embodied carbon without lowering the strength or performance of concrete mix.

By replacing up to 25% of the cement content with slag, Yarra Trams made the sustainable choice to *Build Better* with Futurecrete®. Their choice resulted in a reduction of up to 270,000 kg CO₂ equivalent per year of supply, compared to conventional concrete, as evidenced in Adbri's concrete EPDs.⁵

Yarra Trams and Fulton Hogan are

Building Better

⁵ Comparison between Victorian manufactured 50MPa 20mm 25% Slag concrete and the National Life Cycle Inventory Database (AusLCI) equivalent ready-mix concrete with no cement replacement.

Environmental Product Declarations

The Futurecrete® range is registered through Adbri's suite of independently verified EPDs. Our EPDs are independently verified to ISO 14025 and meet the best practice standard EN 15804, as well as a relevant Product Category Rule, and are registered with EPD Australasia.

EPDs provide comparable information, allowing you to make a more informed choice when selecting products by detailing the environmental impacts of Futurecrete®.

Having access to this information can assist in earning sustainability credits received by environmental bodies.

In addition to the regular Futurecrete® range, any bespoke low carbon concrete mixes curated by our technical team will be supported by customised EPDs to continue providing transparency and details on environmental impact.

The entire Adbri suite of EPDs can be found at: www.adbri.com.au/epd.



Frequently asked questions

What is embodied carbon?

A product's embodied carbon refers to all carbon emissions associated with the raw materials and the manufacturing process of making the product. It is often referred to as Global Warming Potential (GWP) in an EPD.

What are supplementary cementitious materials (SCMs)?

SCMs are used as cement replacement in a concrete mix. SCMs reduce the embodied carbon of concrete when compared to conventional concretes, while also providing performance benefits in a range of applications.

How do you make lower carbon concrete?

Lower carbon concrete is produced using SCMs as cement substitutions. The cement content of a concrete mix is the main driver of its embodied carbon. At Adbri, through our various concrete brands, we have been producing lower carbon concretes for over 15 years.

What are the environmental benefits of lower carbon concrete to the planet?

Futurecrete® reduces the environmental footprint of projects, by repurposing byproducts as SCMs.

Futurecrete®

Choose Futurecrete® from your local Adbri brand

adbri.com.au

Hy-Tec

hy-tec.com.au

QLD NSW VIC NT

Zanows'

hy-tec.com.au

QLD

Adbri Concrete

adbriconcrete.com.au

SA

Central Pre-Mix Concrete

centralpremix.com.au

VIC

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The information contained in this document is accurate as at 1 July 2023 unless stated otherwise.

The information included in this Document and the Net Zero Emissions (NZE) Roadmap released by the Company to the Australian Securities Exchange on 2 May 2022 (Roadmap) is not investment or financial product advice.

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