



**GreenStar
Concrete**

by BGC Concrete

BGC | Concrete

Building a Greener World

Concrete is one of the world's most versatile building materials but traditionally its production is very energy-intensive.

A rising demand for more sustainable building materials has led to the reduction of the carbon footprint of concrete manufacture by using environmentally-friendly materials and recycled water to create a product that's just as strong and durable as regular concrete but takes far less energy to produce.

At BGC, we're using this technology to create new 'green concrete' mixes for our GreenStar Concrete range.

How Our Green Concrete is Made

In our new GreenStar Concrete range, a percentage of the Portland cement content is replaced with ground granulated blast furnace slag or GGBFS. This by-product of steel manufacture would otherwise go to landfill.

By using this industrial waste product to create concrete, we're optimising resource use, reducing greenhouse gas emissions and minimising waste. And because GGBFS is milled finer than cement, it creates a strong, dense and very workable mix. Also using recycled water and manufactured sand, our GreenStar Concrete products require less energy than traditional concrete.



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Our Process is Second to None

- 1 Dedicated silos containing GGBFS allowing custom mixes.
- 2 GreenStar Concrete is designed to perform with 25% manufactured sand.
- 3 Recycled aggregate.
- 4 GreenStar Concrete uses 50% reclaimed or recycled water.



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The Green Star System

The Green Star rating system introduced by the Green Building Council of Australia (GBCA) in 2003 encourages the sustainability and energy-efficiency of buildings through planning, design, construction, commissioning and ongoing use. Green Star-accredited buildings produce fewer greenhouse gas emissions and use less electricity than the Australian average.

The GBCA award star ratings for building categories ranging between Minimum Practice (One Star) to World Leadership (Six Star). Although concrete usage is only a small part of the complex calculation, using environmentally-friendly mixes can add up to 3 points to a building's rating.

3 Star Performance

The GBCA has strict guidelines over what constitutes 'green concrete'. BGC GreenStar Concrete meets the most stringent of these Mat 4 guidelines by using 40% GGBFS, 25% manufactured sand and 50% recycled water giving it the maximum Green Star rating of 3 points.

Benefits of GreenStar Concrete

- Computerisation allows flexibility and repeatability in mix designs at all metropolitan BGC Concrete plants.
 - Separate GGBFS silos add the required 40% cement replacement accurately across all mixes.
 - 6 concrete recyclers recover coarse and fine aggregates.
 - Closed water circuits at every plant allow the maximum quantity of waste water for reuse in concrete manufacture and washout.
 - Water reducers and super plasticisers are automatically metered and added to the load on site.
- This additive management system minimises the addition of on-site water maintaining concrete quality as a priority.
- New generation viscosity modifiers ensure the most efficient use of manufactured sand and recycled aggregates.





Ask About Our Other GreenStar Concrete Products

BGC Concrete has GreenStar Concrete designs for all structural mixes including footpaths, footings, slabs on fill, suspended slabs, columns and stairs, in applications requiring colour addition, steel fibre use for residential, civil, commercial and industrial construction.

Please contact BGC Concrete for further information.



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