Ecoblend The Environmental Choice



Independent Cement



The Ecoblend range of cements are specifically formulated to reduce the environmental impacts of cementitious binders used in concrete and stabilisation products. Ecoblend uses supplementary cements such as slag and flyash to ensure a significantly lower product life cycle impact.

It provides the option of using a binder with significantly less material input, energy input and emission output. A very low embodied energy material can be created.

These significant environmental savings are complimented by Ecoblend's superior technical qualities and comes with no adverse cost implications. In fact, first and second cost savings are often experienced. Hence the much talked about 'Triple Bottom Line' concept is easily met in adopting Ecoblend in your next project.

CEMENT BINDERS AN ENVIRONMENTAL PERSPECTIVE

Independent Cement takes sustainability seriously, designing sustainable and eco-friendly cement products, playing their part in maintaining an ecological balance.

Environmentally Sustainability Design (ESD) is seen to be a critical part of designing high performance, energy and resource efficient buildings that meet the needs of owners, occupants, and the environment.

Life Cycle Analysis (LCA) gives us a way of investigating the life cycle of certain materials in terms of their environmental footprint. ISO 14040 defines standard LCA methodologies and protocols; this allows consistent embodied energy comparison of materials used in construction.

LCA considers a range of environmental impacts such as resource depletion, energy and water use, greenhouse emissions and waste generation among others. Ecoblend cements perform significantly better than Ordinary Portland Cement (OPC) in all of these LCA categories.



Resource Depletion

Ecoblend reduces demand for Ordinary Portland Cement (OPC) a product derived from our inherent natural resources.



Ecoblend reduces the demand requirements for the burning of fossil fuels used in the energy intensive cement clinker production.



Greenhouse Emissions

Ecoblend use will displace CO2 emissions. Displacement of approximately 700kg of CO2 for each tonne of slag used as an OPC replacement is achieved.

Waste Generation

Ecoblend uses an industrial by-product as its major blended component; Granulated Blast Furnace Slag (GBFS), a by-product of steel production. This creates a diversion from landfill for the GBF Slag.



"Sustainable architecture is forcing architects (and engineers) to re-evaluate the basic principals of building design. Academics around the world are claiming green buildings are healthier, more productive to occupy and cheaper to run."

- Graeme Findlay, Partner, Warren and Mahoney Architects.







From this Life Cycle Analysis, we can see how important embodied energy is. Equally important is a construction materials quality, and longevity contribution to the structure.

SUSTAINABLE CONCRETE

Sustainable concrete design can be achieved in two ways:

1. The reduction of embodied energy in specified materials

2. Increased durability- using Ecoblend both criteria can be satisfied.

The Ecoblend LCA illustrates the reduced embodied energy associated with using slag blended cements. Equally important is the construction materials quality, and longevity contribution to the structure.

- Ecoblend provides superior durability qualities to concrete, enabling that structural longevity which ESD strives for.
- Ecoblend 50 meets the Australian Standard AS 3972 Low Heat (LH) Special Purpose Cements.



- Sulphate Resisting Cement (SR) otherwise known as Marine Grade Cement.
- Ecoblend 30 will, deliver significant durability enhancement over the use of a singular OPC.

Environmental Benefits	Technical Benefits	Economic Benefits
Reduced C02 emissions	Hgher ultimate strengths	Longer Structural life
Use of an industrial waste. Diversion from landfill.	Increased durability - chloride and sulphate resistance increased	Reduced structural maintenance cost
Reduced demand for virgin limestone resource	Lower heat of hydration	Equivalent or lower initial and secondary cost (in \$ terms)
Energy resources saved - less requirement to burn fossil fuels	Enhanced workability - both conrete and stabilisation products	
Heat island effects reduced	Protection against AAR	
Lower embodied energy	Efficient hydration at higher strengths	
Extended structural life	Self compacting abilities increased	
	Dye and pigments more readily accepted	

"The single most important factor in reducing the impact of embodied energy is to design long life, durable and adaptable buildings". Australian Greenhouse Office – Good Residential Design Guide Technical Manual 3.1 Materials.



ENVIRONMENTAL QUALIFICATIONS

Independent Cement is at the forefront of the cement industry and committed to meeting the growing demand for sustainable construction options. Specially formulated to reduce the environmental impact of cementitious binders used in concrete design. Independent Cement's Ecoblend products are being used in major products throughout Victoria and NSW.

GECA CERTIFIED

Good Environmental Choice Australia (GECA) is an independent body that certifies products to make sure that any claims made about suitability are verified. Our Ecoblend products have been awarded the GECA tick of approval after completing the stringent process. ICL's Ecoblend, Australian Builders (Type GB) and Steel Cement have achieved the Good Environmental Choice declaration, offered by Australian Environmental Labelling Association Inc (AELA).

Ecoblend is accredited Environmental Product Declaration verifying Ecoblend (ISO 14024:2018).

Ecoblend has been awarded with:

- Environmentally preferable characteristics
- Being fit for purpose
- Meeting environmental best practice
- Manufacturer compliance to a high standard with worker obligations

Green Building Council of Australia

Ecoblend can be used to gain credit points under the Greenstar program, as supplementary cementitious material replacement of Portland Cement.

The Building Design Partnership (BDP) Environment Design Guide highlights Independent Cement's Ecoblend in their Concrete and Sustainability issue published by the Royal Institute of Architects in November 2003.



Independent

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PRODUCT DETAILS

Ecoblend is a type GB cement conforming to AS3972. It consists of various specified proportions of Ordinary Portland Cement (General Purpose Cement), Ground Slag (GBFS) and/or Fly Ash (in the case of a triple blend). Ecoblend cement has a minimum Supplementary Cement Material (SCM) component of 30%.

DESIGNER AND CUSTOM BLENDS

Modern ESD often requires a flexible engineering approach. Independent Cement is conscious of these engineering requirements and will blend to meet specific project requirements. The Ecoblend range is available in many combinations of blends, with a supplementary cement content over 30%.

QUALITY

The Ecoblend range of blended cements conforms to AS 3972 Type GB General and Special Purpose Cement. Independent Cement and Lime's specialised blending facilities provide consistent, homogeneous cement products with predictable performance characteristics. Continual blend analysis ensures tight controls on quality- Quality Assurance to AS/NZS ISO 9001.

AVAILABILITY

The Ecoblend range of products are available throughout New South Wales and Victoria in bulk or bagged form. Our branded Australian Builders Type GB bagged cement conforms to and carries the Good Environmental Choice label as part of the Ecoblend range.



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