Next generation ZINCALUME® steel enabling the next generation of sustainable building.

Today the building industry faces a myriad of changes. The demand on building materials is more complex than ever. In response to these demands, building materials must be more sustainable – combining increased durability, use of less natural resources and lower environmental impacts. Next generation ZINCALUME® steel AM125 sets new industry benchmarks.

Greater durability and greater warranty periods are achieved while using fewer metal resources in the manufacturing process. A smaller environmental footprint of between 10–25% is achieved across all 18 environmental impact categories when compared to the previous ZINCALUME® steel AZ150, in a commercial and industrial roofing application.

LCA Environmental Impact Reduction, AM125 vs AZ150 ZINCALUME® steel.

- Climate change: 17%
- Human toxicity: 19%
- Freshwtr ecotox.: 19%
- Water depletion: 20%
- Metal depletion: 17%
- Fossil depletion: 18%

To see functional unit and more results across all 18 environmental impact categories assessed visit nextgenzincalume.com.au
Assessed using a holistic LCA; including all categories across all life cycle stages

Improvements in products at BlueScope Steel are driven by a holistic philosophy which considers the diverse environmental impacts covered by a Life Cycle Assessment (LCA). Considering only one or two impact categories is a narrow view which can result in sub-optimal sustainability outcomes. For this reason BlueScope Steel advocates LCA as the leading methodology for assessment of environmental sustainability.

With the launch of next generation ZINCALUME® steel, BlueScope Steel commissioned a comprehensive LCA study. LCA considers whole of life from the very beginning of the product’s life (such as the mining of raw materials) to the very end (reuse, recycling or disposal) and all phases in between, including manufacture, transport, design and use. The choices made and what happens at each stage of any product’s lifecycle determines the sustainability of the product and therefore the sustainability of the final building or structure.

Activate™ technology enables a significantly reduced environmental impact across all 18 categories

Next generation ZINCALUME® steel AM125 introduces magnesium into the aluminium-zinc alloy coating which activates the aluminium in the coating, to provide even more effective corrosion resistance. The result is greater durability from fewer metal resources, significantly reducing environmental impacts.

The comprehensive cradle-to-grave LCA conducted by BlueScope Steel shows that next generation ZINCALUME® steel AM125, when compared to ZINCALUME® steel AZ150, has a reduced environmental footprint across all environmental impact categories consistent with the Building Products Innovation Council methodology.

LCA detailed information will be provided as an ISO compliant EPD

To make LCA easy for you to use, BlueScope Steel will be releasing Environmental Product Declarations (EPDs) for our products, commencing with next generation ZINCALUME® steel in 2013, and soon to be followed by COLORBOND® steel. Conducting an LCA of a product is only a component of the sustainability journey. To facilitate the use of the LCA data, that product LCA should be included in an LCA of the application in which it is used, like a building. An EPD delivers LCA data in an ISO14025-compliant format, which is easy to understand and relate to your needs.

At BlueScope Steel we continually work to develop products that meet the changing needs of our built environment for generations to come. So you can be inspired to create with next generation steel.