



Section H Environmental Matters

Logicwall® Environmental Matters, Energy Efficiency,
Core Environmental Performance Characteristics.



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Environmental Matters

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Introduction

AFS as a company is committed to delivering products and manufacturing processes which are both innovative and environmentally responsible. The company has

invested in and installed systems to target recycling of raw products, in particular galvanized steel and timber packaging products.

Energy Efficiency

AFS Logicwall® walls being a monolithic concrete barrier possesses inherent features which greatly assist the designer in achieving the objective of thermal mass and air tightness.

The NCC recognizes the benefit of thermal capacities or mass, and so provides R concessions for heavyweight walls such as those incorporating AFS Logicwall®.

Heavy mass delays the transfer of outdoor temperature variations, improving indoor comfort. The concrete construction of AFS Logicwall® walls provides a significant thermal mass barrier to the external elements. This in turn not only enhances occupant comfort, but also reduces heating/cooling costs and energy consumption whilst improving acoustic performance of the wall against outside noise.

Due to AFS Logicwall® walls being a uniform concrete monolithic mass, the air infiltration rate is practically zero eliminating the possibility of drafts and currents from outside. This contributes significantly to the thermal insulation of the building. Refer to section G4 of this manual for further details on Thermal Insulation

TABLE H1: Core Environmental Performance Characteristics

Core Environmental Performance Characteristics	
Applicable Standards	The nominated product has been tested for fire resistance and acoustic performance by CSIRO. Also, the nominated product has been independently tested for insulation properties.
Other evidence of Fitness for Purpose	As well as being tested for performance qualities, the nominated product has demonstrated market acceptance via numerous current installations across Australia.
Environmental Load Reduction	The nominated product produces a load reduction of greater than 30% for greenhouse gas emissions due to the savings associated with flyash and slag utilisation at a rate of 35% of the concrete. In addition there are savings in transport and savings in installation due to the modular design.
Material Requirements	The materials and manufacturing process required to produce these nominated products do not present any hazard to the manufacturing staff, the consumer of the final product or the environment.
Post-Consumer Recycling	It is necessary to bind the product to the concrete for the functionality of the product. The product may be separated during concrete recycling but it is designed for a very long life span.
Packaging Requirements	The nominated product is packaged on steel and cement board pallets with LDPE plastic wrap. All packaging materials comply with the conditions of this criterion
Compliance to Environmental Regulations	The AFS Systems Pty Ltd manufacturing facility is located within an industrial area and complies with all relevant environmental regulations. There are no discharges from the site other than the collection of solid, non-hazardous waste.
Compliance to Labour, Anti-Discrimination, and Regulations	AFS Systems Pty Ltd provides fair and safe working conditions for all staff

The results of the life cycle impact analysis demonstrated that walls incorporating the AFS Logicwall® product range exhibit an overall reduction greater than 30% of greenhouse gas emissions when compared to pre-cast concrete utilising 100% portland cement. By incorporating an additive mixture of no less than 35% of the required design cement content the walls are able to gain this level of reduced overall GHG and Cumulative Energy Demand Impact.