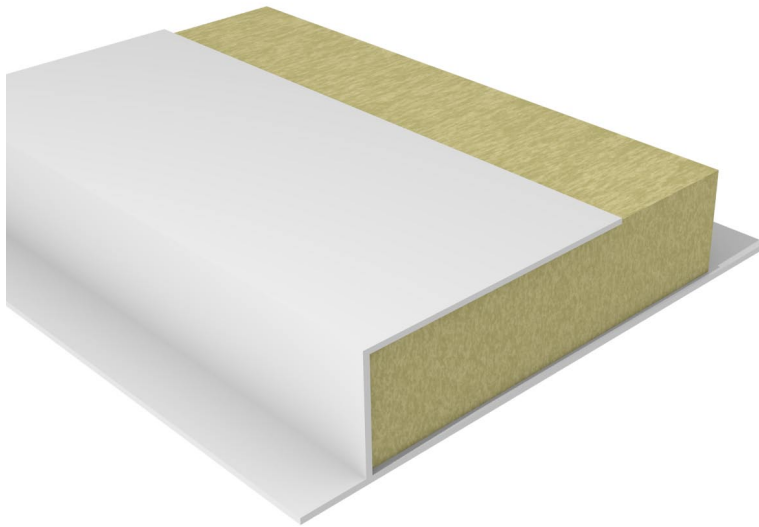




Eco-Closer



Key Features

- Closes off cavities around window and door reveals
- One hour fire integrity
- Available for cavity widths from 50 to 175mm
- Supplied in 2.4m lengths
- Prevents cold bridging
- Insulated with non-combustible rockfibre mineral wool



Description

The ARC Eco-Closer is designed to close off the cavity around window and door reveals without the need for a return block and where a fire rating of up to one hour is required. It prevents cold bridging and eliminates moisture, mould and staining from around windows and doors. The 2.4m lengths are manufactured from a rigid PVCu profile that is insulated with non-combustible rockfibre mineral wool which provides fire, thermal and acoustic properties as well as being ODP and GWP zero rated.

Installation

ARC Eco-Closers are easily installed. Simply cut the jamb profile to the height of the window or door opening plus 75mm to allow the bottom edges to drop into the cavity below the sill. Once the jamb sections are installed, measure the required width for the sill section and cut a length to butt tightly to the jamb sections. The sections simply push fit into the cavity once the openings are formed, and can be secured by either nailing to the block or using a suitable adhesive.

Fire Properties

The rockfibre mineral wool used in the manufacture of ARC Eco-Closer achieves a fire classification of Euroclass A1 as defined in BS EN 13501-1.

ARC's Eco-Closer was tested at Warrington Fire Research achieving 1 hour fire integrity. The tests were carried out in accordance with BS EN 476: Part 20

Warrington Fire Research certificate number: 189654

Thermal Properties: Cold Bridging

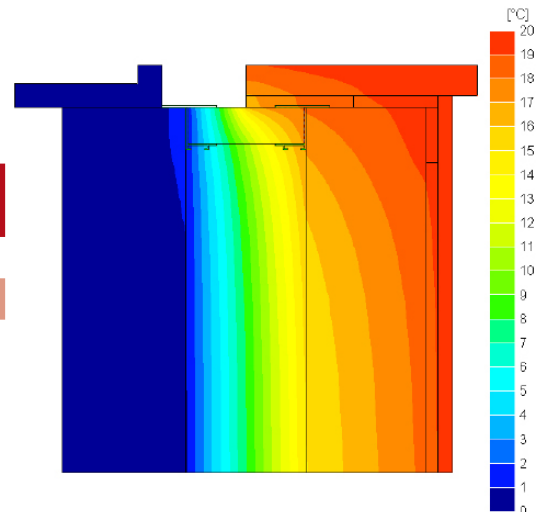
Cold bridges are sections through the fabric of significantly lower thermal resistance than the rest of the construction. It is most commonly found around window and door openings and usually shows itself through so called pattern staining. A cold bridge through an external frame attracts moisture in the form of surface condensation which attracts dirt and dust. This surface condensation can also lead to mould growth and damage to internal plaster and paint work.

Solution

ARC Eco-Closers will significantly reduce the risk of cold bridging around window and door openings when fitted in accordance with the manufacturer’s recommendations.

Detail	Default F-value	F-value with ARC Eco-Closer	Default Ψ-value	Ψ-value with ARC Eco-Closer
Jamb (100mm cavity)	0.75	0.924	0.05	0.016
Sill (100mm cavity)	0.75	0.944	0.04	0.011

As can be seen in the above table, the F-values with an ARC Eco-Closer fitted far exceed the value of 0.75 specified in IP1/06 to avoid mould growth, and likewise the Ψ-values are well below the default values specified. ARC products have been assessed using software that complies with the Standard for Thermal Bridge Calculations BS EN ISO 10211-2007. The conventions for calculations specified in the BRE document BR497 were also followed. The results are compared with the criteria set in the BRE Information Paper IP1/06 ‘Assessing the Effects of Thermal Bridging at Junctions and Around Openings’ which is referenced in Building Regulations.



Above: Temperature distribution illustrating heat loss at a window opening where ARC Contract-Closer is fitted.

Thermal Properties

ARC’s rockfibre mineral wool insulation has a thermal conductivity of 0.035W/mK.

Standards

ARC Eco-Closers use rockfibre mineral wool which conforms to the BS EN 13162: 2001 Thermal Insulation Products for Buildings, Factory Made Mineral Wool Products specification.

Storage and Packaging

ARC Eco-Closers are supplied in branded polythene packs which offer protection during transport as well as providing ease of identification on-site.

It is not recommended that packs are stored in direct sunlight. When storing ARC Eco-Closers for longer periods of time, it is recommended the product should be stored under cover.

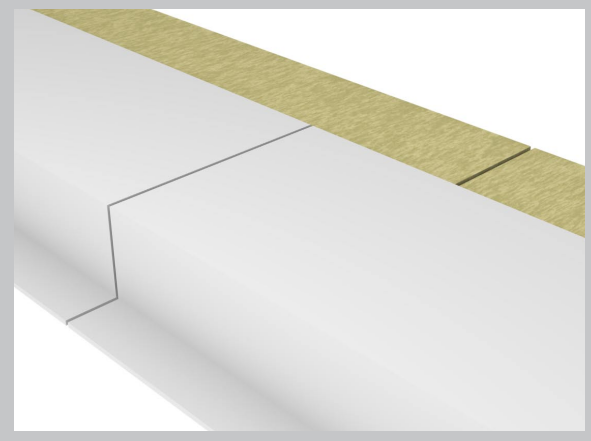
Environment

ARC’s rockfibre mineral wool has no CFCs or HCFCs involved in the manufacturing process and represents no known threat to the environment, and is classed as zero ODP and zero GWP.

ARC Eco-Closers have a Green Guide rating of A+.

Jointing Method

Where a longer length than the supplied 2.4m is required, the following jointing method should be used. Using an appropriate saw, remove 150mm of the plastic profile only, then push the exposed insulation into the next length of plastic profile.



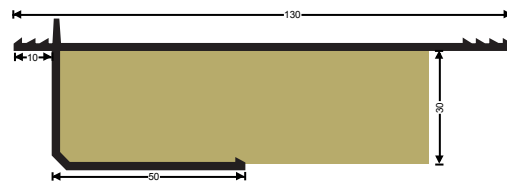
Standard Dimensions

Product Code	Suitable for Cavity Width	Dimensions	Fire Rating	Lengths Per Pack
EC50	50mm	50 x 2400mm	1 hr	8
EC65	65mm	65 x 2400mm	1 hr	8
EC75	75mm	75 x 2400mm	1 hr	8
EC85	85mm	85 x 2400mm	1 hr	8
EC90	90mm	90 x 2400mm	1 hr	8
EC95	95mm	95 x 2400mm	1 hr	8
EC100	100mm	100 x 2400mm	1 hr	8
EC110	110mm	110 x 2400mm	1 hr	6
EC125	125mm	125 x 2400mm	1 hr	6
EC135	135mm	135 x 2400mm	1 hr	6
EC150	150mm	150 x 2400mm	1 hr	6
EC160	160mm	160 x 2400mm	1 hr	5
EC170	170mm	170 x 2400mm	1 hr	5
EC50CR- EC170CR	50 - 170mm	As above but single flange for check reveal	As above	As above

ARC Eco-Closer is supplied with different plastic profiles to suit larger cavity widths as illustrated below. This ensures the product maintains its rigidity right up to a 175mm cavity width.

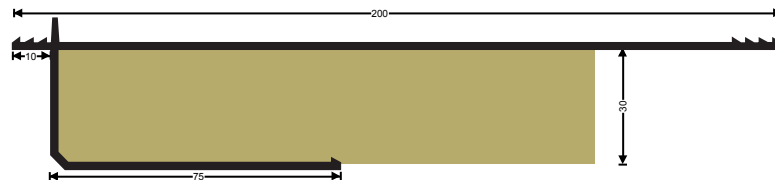
50 - 100mm cavity

EC100 shown



105 - 175mm cavity

EC150 shown



Health and Safety

ARC Building Solutions has an approved Health and Safety Policy and is committed to working and supplying products safely. We have assessed products as required by Substances Hazardous to Health Regulations (COSHH). An ARC COSHH data sheet is available and can be downloaded from ARC's website.