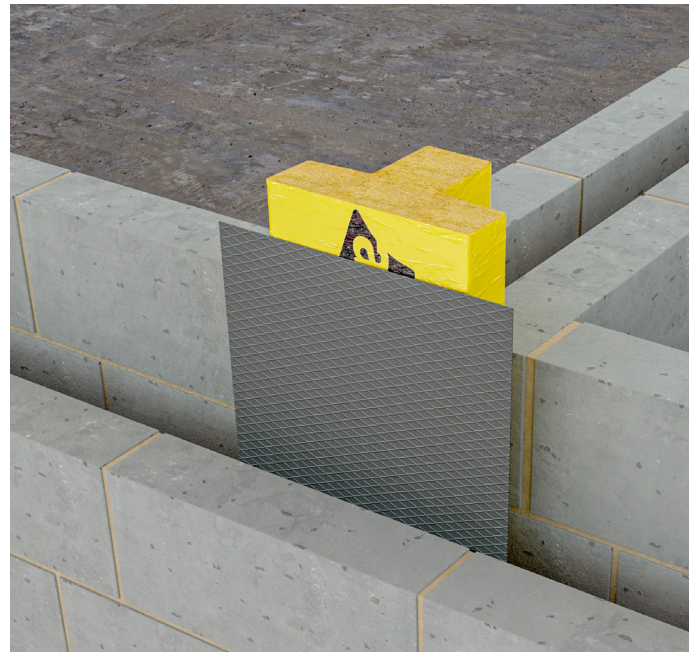




# T-BARRIER® FOUNDATION

Cavity fire barrier for party wall junctions at foundation level

- » Up to 4 hours fire integrity
- » Seals edge of party wall cavity
- » Zero U-value at party wall can be achieved
- » Up to three times more effective as an edge seal than conventional systems
- » Reduces flanking noise
- » Minimises thermal bypass
- » Easy to install
- » Third-party certificated by IFC



# T-BARRIER® FOUNDATION



## Application

ARC T-Barrier Foundation is designed to be used at foundation level before the brickwork commences. It is supplied in a short 600mm length, encapsulated in high-strength polythene to provide maximum protection from the elements. The shorter length is ideal to ensure the product is protected during the time between install and commencement of brickwork.

T-Barrier Foundation is designed to be used in conjunction with the ARC T-Barrier Masonry or Timber Frame within the external wall, enabling the closing of an external cavity at a party wall junction where building regulations require the use of a mineral wool closer for acoustic insulation purposes. Additionally, it provides an effective edge seal around the party wall cavity, helping to achieve a zero U-value.

## Installation

The ARC T-Barrier Foundation is easily installed as the blockwork progresses at foundation level. No mechanical fixings are required, a friction fit within the external cavity and compression fit within the party wall cavity ensure the barrier stays in place.

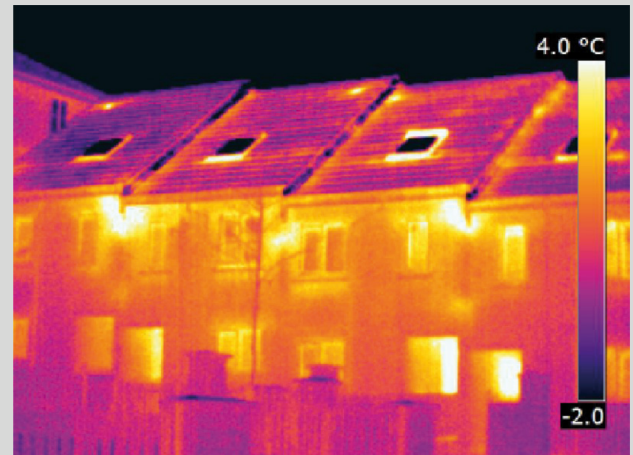
Take care to ensure that the cavity widths being created are accurate, so that the correct fit with the cavity barrier is achieved. When installing, ensure that the T-Barrier Foundation is pushed firmly down against the base of the cavity with no gaps.

## Key Stats

Length supplied	600mm
Third-party certification	IFC certificate number: IFCC 1728
Insulation	Non-combustible rockfibre mineral wool
Thermal conductivity	0.037W/mK
Fire rating	Up to 4 hours (masonry)
Insulation performance	Up to 2 hrs (masonry)
Test standard	EN1366-4
Construction type	Masonry foundations
Orientation	Vertical
Robust Detail compliance	E-WM 1-21

## The Problem: Thermal Bypass

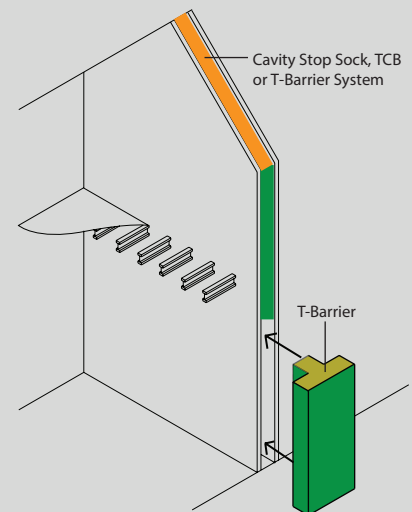
Without effective edge sealing, the party wall cavity allows heat to escape. The image (below) highlights the areas of heat loss in a row of terraced houses. Of particular note is the heat loss at the top of the junction where the party wall cavity meets the external cavity.



## The Solution

ARC T-Barrier creates an effective edge seal around the party wall cavity which, in conjunction with a fully filled party wall cavity, will allow a zero U-value to be achieved.

ARC T-Barrier should be installed vertically where party wall cavity meets the external cavity, while an ARC Cavity Stop Sock or TCB should be used to top out the party wall cavity.



If compliance with NHBC (2016) Chapter 7.2.16 is required, ARC T-Barrier System should be fitted, this providing fire stopping between the party wall blockwork and the roof as well as within the soffit. For more information on ARC T-Barrier System, visit our website [www.arcbuildingsolutions.co.uk](http://www.arcbuildingsolutions.co.uk).

Party Wall Construction	U-value (W W/m <sup>2</sup> K)
Solid	0.0
Unfilled cavity with no effective edge sealing	0.5
Unfilled cavity with ARC T-Barrier installed around all exposed edges and inline with insulation layers in abutting elements	0.2
A fully filled cavity with ARC T-Barrier installed around all exposed edges and inline with insulation layers in abutting elements	0.0

# T-BARRIER® FOUNDATION



## Product & Packaging Specification

Product Code	Maximum Cavity Width		Masonry Fire Performance		Dimensions	Lengths per pack	Packs per pallet
	Party Wall	External Wall	Integrity	Insulation			
TBM75/100GW	75mm	100mm	4hrs	2hrs	85/100 x 105/250 x 600mm	12	10
TBM75/120GW	75mm	120mm	4hrs	2hrs	85/100 x 125/250 x 600mm	12	10
TBM75/125GW	75mm	125mm	4hrs	2hrs	85/100 x 130/250 x 600mm	12	10
TBM75/150GW	75mm	150mm	4hrs	2hrs	85/100 x 155/250 x 600mm	6	14
TBM100/100GW	100mm	100mm	4hrs	2hrs	110/100 x 105/250 x 600mm	12	10
TBM100/120GW	100mm	120mm	4hrs	2hrs	110/100 x 125/250 x 600mm	8	10
TBM100/125GW	100mm	125mm	4hrs	2hrs	110/100 x 130/250 x 600mm	8	10
TBM100/150GW	100mm	150mm	4hrs	2hrs	110/100 x 155/250 x 600mm	6	14
TBM125/100GW	125mm	100mm	4hrs	2hrs	135/100 x 105/250 x 600mm	12	10
TBM125/120GW	125mm	120mm	4hrs	2hrs	135/100 x 125/250 x 600mm	12	10
TBM125/125GW	125mm	125mm	4hrs	2hrs	135/100 x 130/250 x 600mm	12	10
TBM125/150GW	125mm	150mm	4hrs	2hrs	135/100 x 155/250 x 600mm	6	14
TBM150/100GW	150mm	100mm	4hrs	2hrs	160/100 x 105/250 x 600mm	12	10
TBM150/120GW	150mm	120mm	4hrs	2hrs	160/100 x 125/250 x 600mm	12	10
TBM150/125GW	150mm	125mm	4hrs	2hrs	160/100 x 130/250 x 600mm	12	10
TBM150/150GW	150mm	150mm	4hrs	2hrs	160/100 x 155/250 x 600mm	6	14

Can't find your size? ARC T-Barrier Foundation can be manufactured to suit any cavity width up to 300mm, including any intermediary sizes not listed above. **Call our technical experts on 0113 252 9428 to discuss your requirements.**

## Fire Properties

ARC T-Barrier Foundation has been fire tested in accordance with the principles given in EN1366-4, achieving up to four hours fire integrity within a masonry construction.

ARC T-Barrier Foundation is certificated by IFC Certification, a third-party accreditation scheme. IFC's product certifications are designed to give confidence to architects, specifiers, contractors, users, occupiers and owners that products have been thoroughly and independently evaluated and will continue to be manufactured to the same specification as originally tested.

IFC certificate number: IFCC 1728

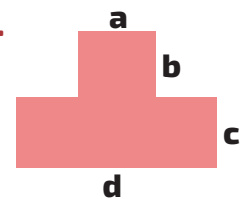
## Non-Standard Applications

Where usage falls outside of the certificated scope, for example when used with external cladding, or with an internal metal frame system, performance of the fire barrier will depend heavily upon the structural integrity and fire performance of the surrounding construction.

Specifiers must ensure all construction elements that make up part of the internal or external leaf of the wall, including support systems, are suitable for use with a cavity fire barrier for the length of fire integrity and insulation required. Particular attention must be paid to any possible deflection or distortion which could cause gaps to form between the construction and any fire barrier installed.

## Dimensions explained...

$a/b \times c/d \times \text{length}$



## Non-Standard Applications cont.

In the event of a fire, ARC Building Solutions Ltd cannot accept liability for failure where usage is outside of the standard application, including but not limited to, where deflection or distortion has allowed gaps to form around the barrier, or where the barrier is not fitted in accordance with the manufacturer's guidelines.

## Standards

ARC T-Barrier Foundation is manufactured using rockfibre mineral wool which achieves a fire classification of Euroclass A1 as defined in BS EN 13501-1, and conforms to BS EN 13162 and EN16001 Energy Management Systems.

ARC's rockfibre mineral wool insulation has a thermal conductivity of 0.037W/mK.

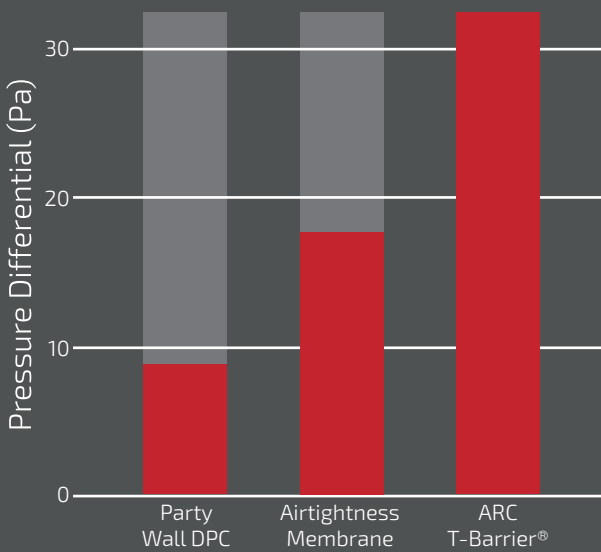


## Edge Seal Effectiveness

The effectiveness of ARC T-Barrier as an edge seal has been independently tested by Leeds Beckett University. The test replicated real life conditions by measuring the differentials between pressurised and non-pressurised cavities.

This ground-breaking test is the only effective test available currently to measure a product's effectiveness as an edge seal.

ARC T-Barrier was found to provide three times the pressure differential compared to a conventional cavity barrier system, and nearly twice the pressure differential of the Airtightness Membrane employed by some house builders.



Results presented were obtained using a 100mm party wall cavity with a 100mm external cavity.



**Leeds Sustainability  
Institute**

## Storage and Packaging

ARC T-Barrier Foundation is supplied in polythene packs which are designed for transporting and protecting the products. It is not recommended that the packs are stored in direct sunlight. When storing the barriers for longer periods of time it is recommended that the product should be stored indoors, or under cover.

## Environment

No CFCs or HCFCs are involved in the manufacturing process of ARC's rockfibre mineral wool insulation. The material presents no known threat to the environment and is classed as ODP and GWP zero.

ARC T-Barrier Foundation has a Green Guide rating of A+.

## Health and Safety

ARC Building Solutions has an approved Health and Safety Policy and is committed to working and supplying products safely. ARC's rockfibre mineral wool is not classed as a possible human carcinogen. 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.

Any information provided within this document is intended for guidance only. Expert technical advice should be sought before specification or installation of any product. It is of particular importance to ensure that any fire barrier or fire stopping product is tested for use with the exact application intended. ARC Building Solutions Ltd cannot accept liability for failure where usage is outside of the standard application, including but not limited to, where deflection or distortion has allowed gaps to form around the barrier, or where the barrier is not fitted in accordance with the manufacturer's guidelines.

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Certificate Number 19310  
ISO 9001, ISO 14001  
ISO 45001