

ARC 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
- » Minimises **thermal bypass**
- » **Easy** to install
- » **Third-party certificated** by IFC



Third Party
Certificated



Exceeds Performance
Requirements



Fire
Product



Excellent Thermal
Properties



NBS Source
PARTNER



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.

Installation

The person installing the ARC T-Barrier® Foundation should first familiar themselves with this datasheet, ensuring the correct product is being fitted into the cavity.

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.

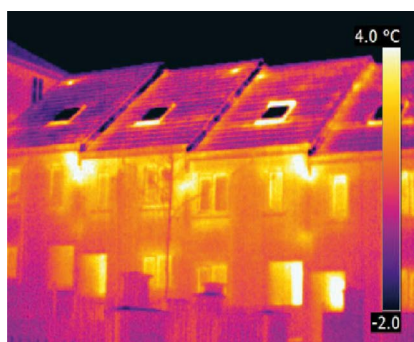
T-Barrier® Foundation is designed to be used in conjunction with the ARC T-Barrier® Masonry or Timber Frame within the external wall, enabling the closing of an external cavity at a party wall junction where building regulations require the use of a mineral wool closer. Additionally, it provides an effective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

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.

Care should be taken when handling the product to ensure that the mineral wool isn't damaged.

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.

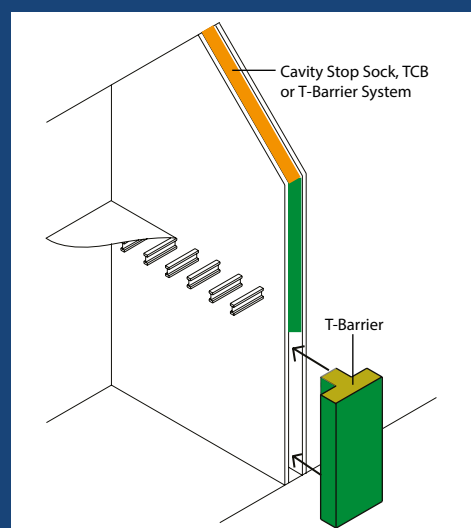


The Solution

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.



Party Wall Construction	U-value (W W/m2K)
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

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 Resistance (Insulation)	Up to 2 hours
Fire Resistance (Integrity)	Up to 4 hours
Mass	Data available on request
Construction type	Masonry
Test standard	EN1366-4

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.

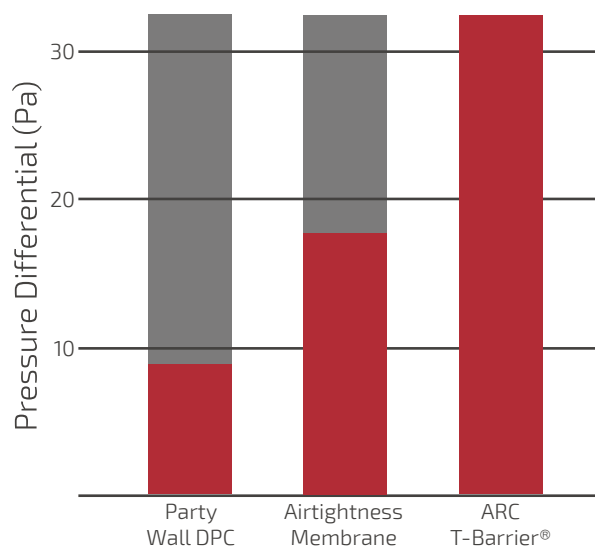
IFC certificate number: IFCC 1728

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
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Protecting People.
Protecting Places.

Product & Packaging Specifications

Product Code	Maximum External 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	6	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

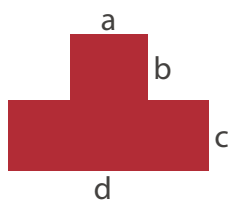
All performance claims can be evidenced on IFC certificates IFC 1728.

Can't find your external cavity 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.

Dimensions explained

a/b x c/d x length



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arc®
Protecting People.
Protecting Places.

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.

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

As required by building regulations, the mineral wool is encapsulated in polythene. This element is not noncombustible.

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.

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.

Storage & 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 especially during inclement weather or overnight.

Health & Safety

At ARC Building Solutions, safety is a top priority, both in how we work and the products we supply.

We've carefully assessed the materials we use, and we're pleased to say our rockfibre mineral wool isn't classed as a possible carcinogen. This means that, in line with UK regulations, our products don't require a safety data sheet.

Our products have no hazardous classifications under UK REACH and GB CLP regulations when it comes to physical, health, or environmental risks.

As always, we recommend following the product instructions when handling and installing ARC products. If you'd like more information on our approach to health and safety as a whole, just ask us for a Safety Data Sheet (SDS).

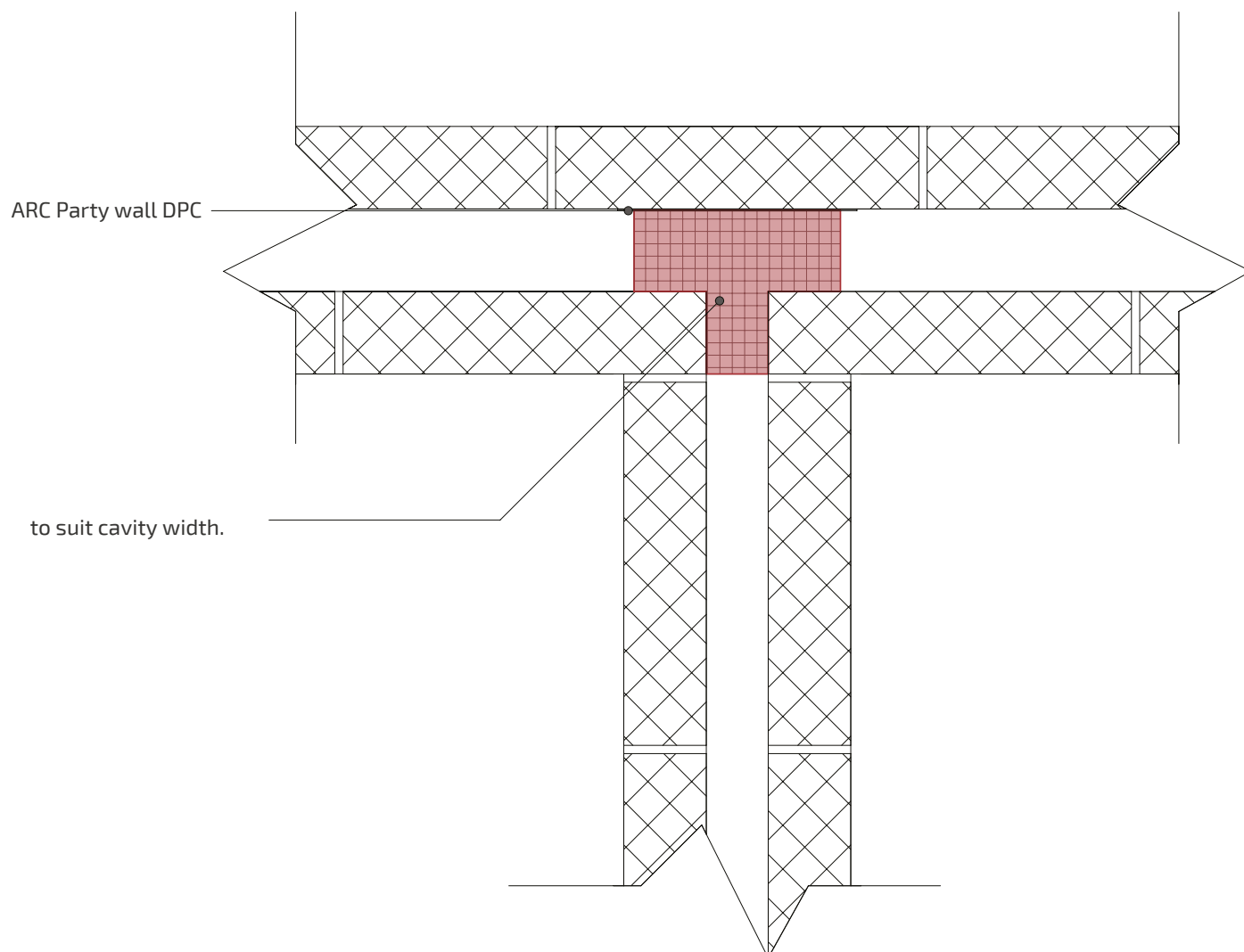
Environment

No CFCs or HCFCs are involved in the manufacturing process of ARC's rockfibre mineral wool insulation. Additionally, the mineral wool has a Green Guide rating of A+.

This product can be disposed of via landfill; preferably, the product should be returned to ARC Building Solutions so that the waste can be separated and recycled accordingly.

Typical Detail Example

Please find a detail drawing for a typical detail where the T-Barrier® Foundation has been installed.



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. Due to the protective polythene, the product as a whole cannot be classified as A1 non-combustible.

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