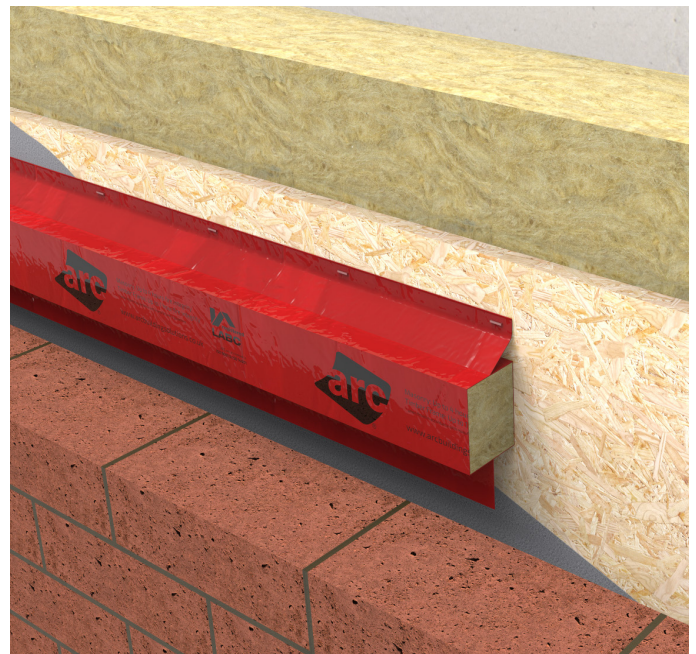




# TCB

## Cavity fire barrier for timber frame construction

- » Up to 60 minutes fire integrity
- » Horizontal and vertical options
- » Can be used around window and door openings
- » Specified in terraced, semi-detached, apartments and major projects
- » Meets requirements of Robust Detail Part E and Approved Document B
- » Maximum cavity width available: 150mm
- » Easily installed
- » Third-party certificated by IFC



## Application

ARC TCB restricts the spread of smoke and flames within the cavity of timber frame walls, while also minimising the effect of flanking noise pollution. It is ideally suited for providing a cavity barrier within the external wall cavity, in line with a separating wall or floor, and around window and door openings, as specified in Approved Document B.

## Installation

ARC TCB is designed to be compression fitted within the wall cavity. Typically the product is first be fixed through the flanges to the timber frame structure, with the brick work then laid creating the cavity and compressing the ARC TCB to its required fit. Alternatively it can be built in as brickwork progresses. Where ARC TCB is used within the party wall cavity itself, it will be necessary to fit the product as the timber kit is erected.

### Option 1 – use the flanges to fix the cavity barrier to the timber kit prior to brickwork (vertical or horizontal installs):

- » Using the polythene flanges, fix the ARC TCB to the timber frame inner leaf. Clout nails or staples should be used at approx. 150mm centres. Vertical application: use both flanges. Horizontal application: it is only necessary to use the flange running along the top of the barrier
- » At the end of a run, or at a corner, lengths of barrier should be cut to the required length, and then tightly butt jointed ensuring no gaps remain.
- » Brick work can now be completed, closing in the barrier within the cavity. Care must be taken that the brick work is accurate and that the cavity created is of a suitable width for the barrier installed.

### Option 2 – Build in as brickwork progresses (suited best to horizontal installs):

- » Build the brickwork up to the level the barrier will be installed, ensuring the width of the cavity is correct. Allow the brickwork to set, before push fitting the barrier in to place and under the correct compression.
- » At the end of a run, or at a corner, lengths of barrier should be cut to the required length, and then tightly butt jointed ensuring no gaps remain.

### General Tips & Advice:

- » The coloured polythene encapsulation and flanges do not contribute to the performance of the cavity barrier, but can help hold the barrier in place until the brick work is completed, while offering weather protection and product identification. The polythene must be left in place for these purposes, however if the polythene becomes torn or damaged, or the flanges are not fixed, there is no cause for concern.
- » It is the compression fit of the cavity barrier installed in to an appropriately sized cavity, as per the guidance on this datasheet, that creates a correct and robust install. The cavity width must be accurate and match the design width for the cavity barrier that has been installed.
- » You should not attempt to squash the barrier before installation. Although this can make the barrier easier to fit, it is likely to cause gaps and may damage the barrier, resulting in reduced performance.

## Key Stats

Length supplied	1.2m
Third-party certification	TCB: IFC certificate number: IFCC 1727  Party Wall TCB: IFC certificate number: IFCC 1728
Insulation	Non-combustible rockfibre mineral wool
Thermal conductivity	0.037W/mK
Fire rating	Up to 60 minutes
Insulation performance	15 minutes
Test standard	EN1366-4
Construction type	Timber frame
Orientation	Vertical or horizontal
Robust Detail compliance	E-WT 1-4, E-FT 1-6

## Fire Properties

ARC TCB has been fire tested in accordance with the principles given in EN1366-4, achieving up to 60 minutes fire integrity within a timber frame construction.

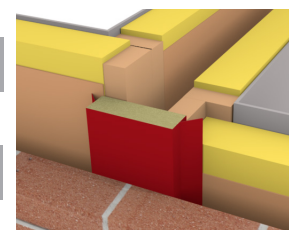
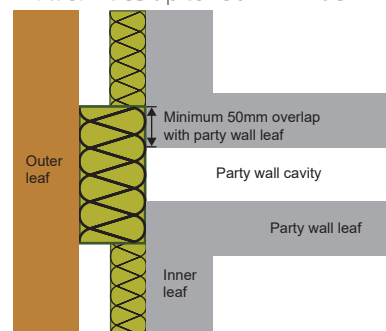
TCB is certificated by IFC Certification, a third-party accreditation scheme. IFC's product certifications are designed to give confidence to architects, specifiers, contractors, users, occupiers and owners that products have been thoroughly and independently evaluated and will continue to be manufactured to the same specification as originally tested.

TCB - IFC certificate number: IFCC 1727

Party Wall TCB - IFC certificate number: IFCC 1728

## Party Wall Junction

ARC's Party Wall TCB is designed for use at the party wall junction, and should be fitted in the external wall cavity, with a minimum 50mm overlap either side of the party wall cavity. At 250mm wide, ARC's PWTCB range is suitable for use with party wall cavities up to 150mm wide.



Scan or click the QR code to watch the installation video





## Product & Packaging Specification: Timber to Brickwork

Product Code	Maximum Cavity Width	Sleeve Colour	Timber to Brickwork Fire Performance		Compression Required	Dimensions	Lengths per pack	Packs per pallet
			Integrity	Insulation				
TCB50	Up to 50mm	Red	60 mins	15 mins	15mm	65 x 65 x 1200mm	40	12
TCB55	Up to 55mm	Red	60 mins	15 mins	15mm	70 x 75 x 1200mm	35	10
TCB60	Up to 60mm	Red	60 mins	15 mins	15mm	75 x 75 x 1200mm	35	10
TCB65	Up to 65mm	Red	60 mins	15 mins	15mm	80 x 75 x 1200mm	35	10
TCB70	Up to 70mm	Red	60 mins	15 mins	15mm	85 x 75 x 1200mm	35	10
TCB75	Up to 75mm	Red	60 mins	15 mins	15mm	90 x 75 x 1200mm	35	10
TCB80	Up to 80mm	Yellow	60 mins	15 mins	15mm	95 x 150 x 1200mm	16	10
TCB85	Up to 85mm	Yellow	60 mins	15 mins	15mm	100 x 150 x 1200mm	16	10
TCB90	Up to 90mm	Yellow	60 mins	15 mins	15mm	105 x 150 x 1200mm	16	10
TCB95	Up to 95mm	Yellow	60 mins	15 mins	15mm	110 x 150 x 1200mm	16	10
TCB100	Up to 100mm	Yellow	60 mins	15 mins	15mm	115 x 150 x 1200mm	15	8
TCB105	Up to 105mm	Yellow	60 mins	15 mins	15mm	120 x 150 x 1200mm	15	8
TCB110	Up to 110mm	Yellow	60 mins	15 mins	15mm	125 x 150 x 1200mm	12	10
TCB115	Up to 115mm	Yellow	60 mins	15 mins	15mm	130 x 150 x 1200mm	12	10
TCB120	Up to 120mm	Yellow	60 mins	15 mins	15mm	135 x 150 x 1200mm	12	10
TCB125	Up to 125mm	Yellow	60 mins	15 mins	15mm	140 x 150 x 1200mm	12	10
TCB130	Up to 130mm	Yellow	60 mins	15 mins	15mm	145 x 150 x 1200mm	12	10
TCB135	Up to 135mm	Yellow	60 mins	15 mins	15mm	150 x 150 x 1200mm	12	8
TCB140	Up to 140mm	Yellow	60 mins	15 mins	15mm	155 x 150 x 1200mm	12	8
TCB145	Up to 145mm	Yellow	60 mins	15 mins	15mm	160 x 150 x 1200mm	12	8
TCB150	Up to 150mm	Yellow	60 mins	15 mins	15mm	165 x 150 x 1200mm	12	8

### ARC Party Wall TCB: vertical cavity fire barrier at the party wall junction

PWTCB50	Up to 50mm	White	60 mins	60 mins	5mm	55 x 250 x 1200mm	12	10
PWTCB55	Up to 55mm	White	60 mins	60 mins	5mm	60 x 250 x 1200mm	12	10
PWTCB60	Up to 60mm	White	60 mins	60 mins	5mm	65 x 250 x 1200mm	12	10
PWTCB65	Up to 65mm	White	60 mins	60 mins	5mm	70 x 250 x 1200mm	10	10
PWTCB70	Up to 70mm	White	60 mins	60 mins	5mm	75 x 250 x 1200mm	10	10
PWTCB75	Up to 75mm	White	60 mins	60 mins	5mm	80 x 250 x 1200mm	10	10
PWTCB80	Up to 80mm	White	60 mins	60 mins	5mm	85 x 250 x 1200mm	8	10
PWTCB85	Up to 85mm	White	60 mins	60 mins	5mm	90 x 250 x 1200mm	8	10
PWTCB90	Up to 90mm	White	60 mins	60 mins	5mm	95 x 250 x 1200mm	8	10
PWTCB95	Up to 95mm	White	60 mins	60 mins	5mm	100 x 250 x 1200mm	8	10
PWTCB100	Up to 100mm	White	60 mins	60 mins	5mm	105 x 250 x 1200mm	8	10
PWTCB105	Up to 105mm	White	60 mins	60 mins	5mm	110 x 250 x 1200mm	8	10
PWTCB110	Up to 110mm	White	60 mins	60 mins	5mm	115 x 250 x 1200mm	8	10
PWTCB115	Up to 115mm	White	60 mins	60 mins	5mm	120 x 250 x 1200mm	6	10
PWTCB120	Up to 120mm	White	60 mins	60 mins	5mm	125 x 250 x 1200mm	6	10
PWTCB125	Up to 125mm	White	60 mins	60 mins	5mm	130 x 250 x 1200mm	6	10
PWTCB130	Up to 130mm	White	60 mins	60 mins	5mm	135 x 250 x 1200mm	6	10
PWTCB135	Up to 135mm	White	60 mins	60 mins	5mm	140 x 250 x 1200mm	6	10
PWTCB140	Up to 140mm	White	60 mins	60 mins	5mm	145 x 250 x 1200mm	6	10
PWTCB145	Up to 145mm	White	60 mins	60 mins	5mm	150 x 250 x 1200mm	6	10
PWTCB150	Up to 150mm	White	60 mins	60 mins	5mm	155 x 250 x 1200mm	6	10

Can't find your size? ARC TCB can be manufactured to suit any cavity width up to 150mm, including any intermediary sizes not listed above. Call our technical experts on 0113 252 9428 to discuss your requirements.



## Product & Packaging Specification: Timber to Timber

Product Code	Maximum Cavity Width	Sleeve Colour	Timber to Timber Fire Performance		Compression Required	Dimensions	Lengths per pack	Packs per pallet
			Fire Integrity	Insulation				
TCBTT50	Up to 50mm	Yellow	60 mins	30 mins	25mm	75 x 150 x 1200mm	24	10
TCBTT55	Up to 55mm	Yellow	60 mins	30 mins	25mm	80 x 150 x 1200mm	20	10
TCBTT60	Up to 60mm	Yellow	60 mins	30 mins	25mm	85 x 150 x 1200mm	20	10
TCBTT65	Up to 65mm	Yellow	60 mins	30 mins	25mm	90 x 150 x 1200mm	16	10
TCBTT70	Up to 70mm	Yellow	60 mins	30 mins	25mm	95 x 150 x 1200mm	16	10
TCBTT75	Up to 75mm	Yellow	60 mins	30 mins	25mm	100 x 150 x 1200mm	16	10
TCBTT80	Up to 80mm	Yellow	60 mins	30 mins	25mm	105 x 150 x 1200mm	16	10
TCBTT85	Up to 85mm	Yellow	60 mins	30 mins	25mm	110 x 150 x 1200mm	16	10
TCBTT90	Up to 90mm	Yellow	60 mins	30 mins	25mm	115 x 150 x 1200mm	15	10
TCBTT95	Up to 95mm	Yellow	60 mins	30 mins	25mm	120 x 150 x 1200mm	15	10
TCBTT100	Up to 100mm	Yellow	60 mins	30 mins	25mm	125 x 150 x 1200mm	12	10

Can't find your size? ARC TCB Timber to Timber can be manufactured to suit any cavity width up to 100mm, including any intermediary sizes not listed above. **Call our technical experts on 0113 252 9428 to discuss your requirements.**

### 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.

### Standards

ARC TCB 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.

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.

© 2024 ARC Building Solutions Ltd. ARC and T-Barrier are registered trademarks of ARC Building Solutions Ltd.

### Storage and Packaging

ARC TCB 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 TCB 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.



Certificate Number 19310  
ISO 9001, ISO 14001  
ISO 45001