

TCB

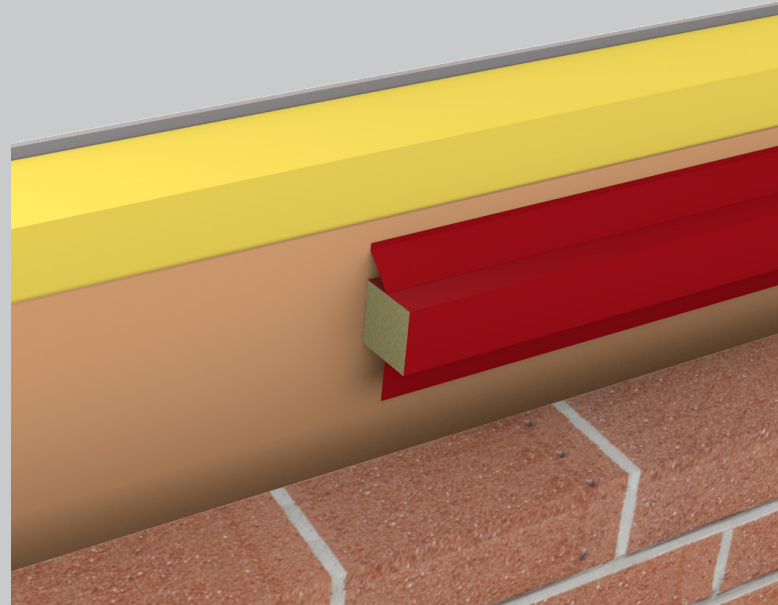


cavity fire barrier
for timber frame construction



key features

- » Up to one hour fire integrity
- » Specified in semi-detached, apartments and major projects
- » Complies to Robust Detail Part E and Building Regulations
- » Can be manufactured to suit cavity widths up to 150mm
- » Easy to install



Application

ARC TCB restricts the spread of smoke and flames within timber frame cavity walls, as well as minimising the effect of flanking noise pollution at wall junctions. They are manufactured from low resin, non-combustible rockfibre mineral wool insulation and are sleeved in polythene for on-site protection.

Installation

ARC TCB is designed to be compression fitted within a timber frame cavity. In vertical applications, both flanges are fixed, in horizontal applications only the top flange should be fixed. The flanges are fixed to the frame using clout nails at 150mm centres. The polythene encapsulation offers on-site weather protection, but can be cut away without affecting the barrier's performance.

Care should be taken butt joints are tightly fitted with no gaps remaining. The barrier must fully fill the cavity from brick to timber, with any cavity insulation cut back.

At door and window openings it is recommended the horizontal barrier should overlap the vertical barrier to ensure a close butted fit can be achieved.

Fire Properties

ARC TCB has been fire tested at Warrington Fire Research, achieving up to one hour fire integrity in timber frame construction. These tests comply with BS 476: Part 20: 1987 and BSEN 1366-4: 2006, using the test method stated EGOLF TC2 N421 (fire resistance for cavity barriers).

Certifire scope: CF5403

Don't take our word for it, see our certification...



Assessed to ISO 9001 & ISO 14001
BRE Certificate No. 1227



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.

Acoustic Properties

The rockfibre mineral wool insulation used in the manufacture of ARC TCBs has the following acoustic absorption properties. Figures quoted were achieved with a solid backing.

| Thickness | 125Hz | 250Hz | 500Hz | 1000Hz | 2000Hz | 4000Hz |
|-----------|-------|-------|-------|--------|--------|--------|
| 40mm | 0.19 | 0.46 | 0.79 | 0.92 | 1.00 | 1.00 |
| 100mm | 0.57 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Part E Robust Details compliance:

| | Separating Wall/ Party Wall | Separating Floor |
|--------------|--------------------------------|------------------|
| Timber Frame | E-WT 1-4 | E-FT 1-6 |

Storage and Packaging

ARC TCBs are 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.

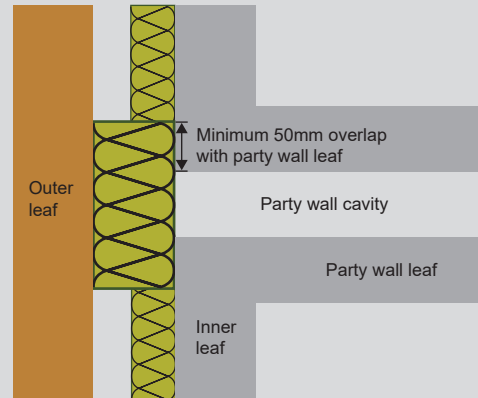
You might also be interested in...

ARC T-Barrier System:
Fire, Thermal and
Acoustic Requirements
at the Party Wall and
Pitched Roof

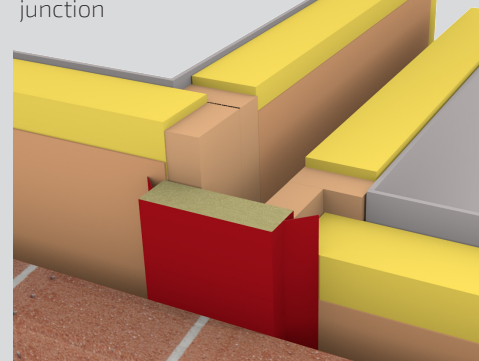


Party Wall Junction

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



Party Wall TCB installed vertically at party wall junction



Dimensions & Packaging Specification: Timber to Brickwork

| Product Code | Suitable for Cavity Width | TCB Colour | Timber to Brickwork Fire Rating | Dimensions | Pieces per pack | Packs per pallet |
|---------------------|---------------------------|------------|---------------------------------|--------------------|-----------------|------------------|
| TCB50 | 50mm | Red | 1 hr | 65 x 65 x 1200mm | 40 | 12 |
| TCB75 | 75mm | Red | 1 hr | 90 x 75 x 1200mm | 35 | 12 |
| TCB100 | 100mm | Orange | 1 hr | 115 x 120 x 1200mm | 20 | 8 |
| TCB125 | 125mm | Yellow | 1 hr | 140 x 120 x 1200mm | 15 | 10 |
| TCB150 | 150mm | Yellow | 1 hr | 165 x 120 x 1200mm | 12 | 10 |
| ARC Party Wall TCBs | | | | | | |
| PWTCB50 | 50mm | White | 1 hr | 65 x 250 x 1200mm | 12 | 10 |
| PWTCB75 | 75mm | White | 1 hr | 90 x 250 x 1200mm | 10 | 10 |
| PWTCB100 | 100mm | White | 1 hr | 115 x 250 x 1200mm | 8 | 10 |
| PWTCB125 | 125mm | White | 1 hr | 140 x 250 x 1200mm | 6 | 10 |
| PWTCB150 | 150mm | White | 1 hr | 165 x 250 x 1200mm | 6 | 10 |

Dimensions & Packaging Specification: Timber to Timber

| Product Code | Suitable for Cavity Width | TCB Colour | Timber to Timber Fire Rating | Dimensions | Pieces per pack | Packs per pallet |
|-----------------|---------------------------|------------|------------------------------|--------------------|-----------------|------------------|
| TCBTT50 | 50mm | Yellow | 1 hr | 75 x 150 x 1200mm | 24 | 10 |
| TCBTT75 | 75mm | Yellow | 1 hr | 100 x 150 x 1200mm | 16 | 10 |
| TCBTT100 | 100mm | Yellow | 1 hr | 125 x 150 x 1200mm | 12 | 10 |

Can't find your size? ARC TCB can be manufactured to suit any cavity width up to 150mm, including any intermediary size not shown above. Contact us for more information.

Non-Standard Applications

ARC TCB is certified for use in timber frame applications, either timber to brickwork, or timber to timber, as described in the dimensions and packaging specification above.

Where usage falls outside of this scope, for example when used with external cladding, or with an internal metal frame system, performance of the fire barrier will depend upon the structural integrity and fire performance of the surrounding construction. The suitability of the material for use with a fire barrier should be confirmed by the cladding or system manufacturer before use, with particular attention paid to any possible deflection.

Please note that for applications outside of the standard application, or not in accordance with the Certifire scope, both Certifire certification and fire ratings stated on this datasheet do not apply.