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**arc.**<sup>®</sup>

Protecting People.  
Protecting Places.

# ARC T-BARRIER<sup>®</sup> PITCHED ROOF

Fire stopping between party wall and roof covering

- » Up to **4 hours fire integrity**
- » Provides fire stopping at the **head of a block party wall**
- » Can be used in **masonry or timber construction**
- » Held in position by **compression fit** within the party wall cavity
- » Sits in compression **directly under the roofing membrane**
- » Can also be **used in flat roofs**
- » **Third party certificated** by IFC



Third Party  
Certificated



Exceeds Performance  
Requirements



Fire  
Product



Excellent Thermal  
Properties



**NBS Source**  
PARTNER

**IFC** Certification  
✓✓✓

# Application

The ARC T-Barrier® Pitched Roof is designed to provide a fire, thermal barrier between the top of the party wall blockwork and the underslating felt. The product is fitted along the length of the roof pitch, from soffit to apex ensuring an effective and consistent barrier.

NHBC 7.2.16 states that a separating wall should stop 25mm below the top of the adjacent roof trusses. ARC T-Barrier® Pitched Roof is designed to compress within this gap, satisfying the NHBC recommendation for a mineral wool fire barrier.

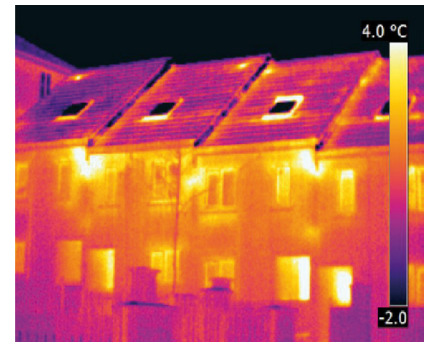
# Installation

The installer should first familiarise themselves with this datasheet and ensure that the correct ARC T-Barrier® Pitched Roof product is being fitted for the construction type and cavity width.

The ARC T-Barrier® Pitched Roof is designed for installation in both masonry and timber-frame party wall constructions. Once the party wall structure is complete, the product is positioned within the cavity, with the unique T-shape held securely in place by compression between the two leaves of the construction.

## 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.



| Party Wall Construction                                                                                                             | U-value<br>(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              | 1.2m                                   |
| Third-party certification    | IFC certificate number: IFCC 1728      |
| Insulation                   | Non-combustible rockfibre mineral wool |
| Thermal conductivity         | 0.037W/mK                              |
| Fire Resistance (Insulation) | Up to 120 minutes                      |
| Fire Resistance (Integrity)  | Up to 240 minutes                      |
| Mass                         | Data available on request              |
| Test standard                | EN1366-4                               |
| Construction                 | Masonry or Timber                      |
| Roof type                    | Pitched or flat roof                   |

## Fire Properties

ARC T-Barrier® Pitched Roof has been fire tested in accordance with the principles given in EN1366-4, achieving 240 minutes fire integrity and 120 minutes insulation within a masonry construction. Real world performance may be affected by the fire performance of supporting and abutting elements, for example a spandrel panel or roof membrane.

ARC T-Barrier® Pitched Roof is third-party certificated by IFC Certification. IFC's product certification is 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. Certificates can be verified and downloaded from IFCC's website.

IFC certificate number: IFCC 1728

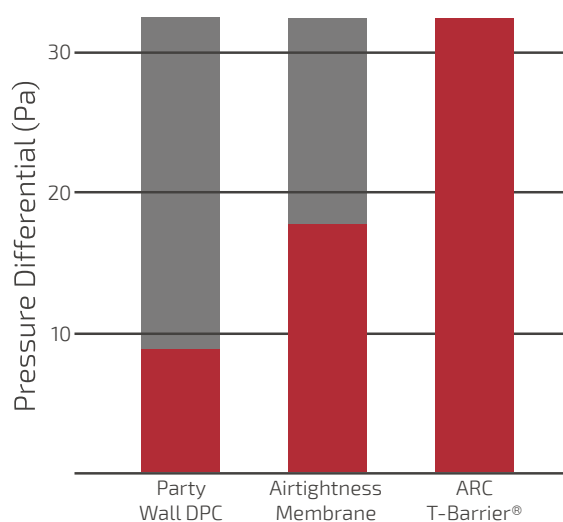
Test reports and material datasheets are all available upon request.

### 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.

## Product & Packaging Specifications

| Product Code | Maximum Gap Size |          | Dimensions                | Lengths per pack | Packs per pallet |
|--------------|------------------|----------|---------------------------|------------------|------------------|
|              | Party Wall       | Gap Size |                           |                  |                  |
| TBR50/25     | 50mm             | 25mm     | 65/65 x 50/300 x 1200mm   | 9                | 10               |
| TBR75/25     | 75mm             | 25mm     | 90/75 x 50/300 x 1200mm   | 9                | 10               |
| TBR100/25    | 100mm            | 25mm     | 120/100 x 50/300 x 1200mm | 9                | 10               |
| TBR125/25    | 125mm            | 25mm     | 135/120 x 50/300 x 1200mm | 6                | 12               |
| TBR150/25    | 150mm            | 25mm     | 160/120 x 50/300 x 1200mm | 3                | 14               |

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

**Can't find your gap size?** ARC T-Barrier® Pitched Roof can be manufactured to non-standard sizes available on request.

**Call our technical experts on 0113 252 9428 to discuss your requirements.**

## Standards

ARC T-Barrier® Pitched Roof 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® Pitched Roof 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

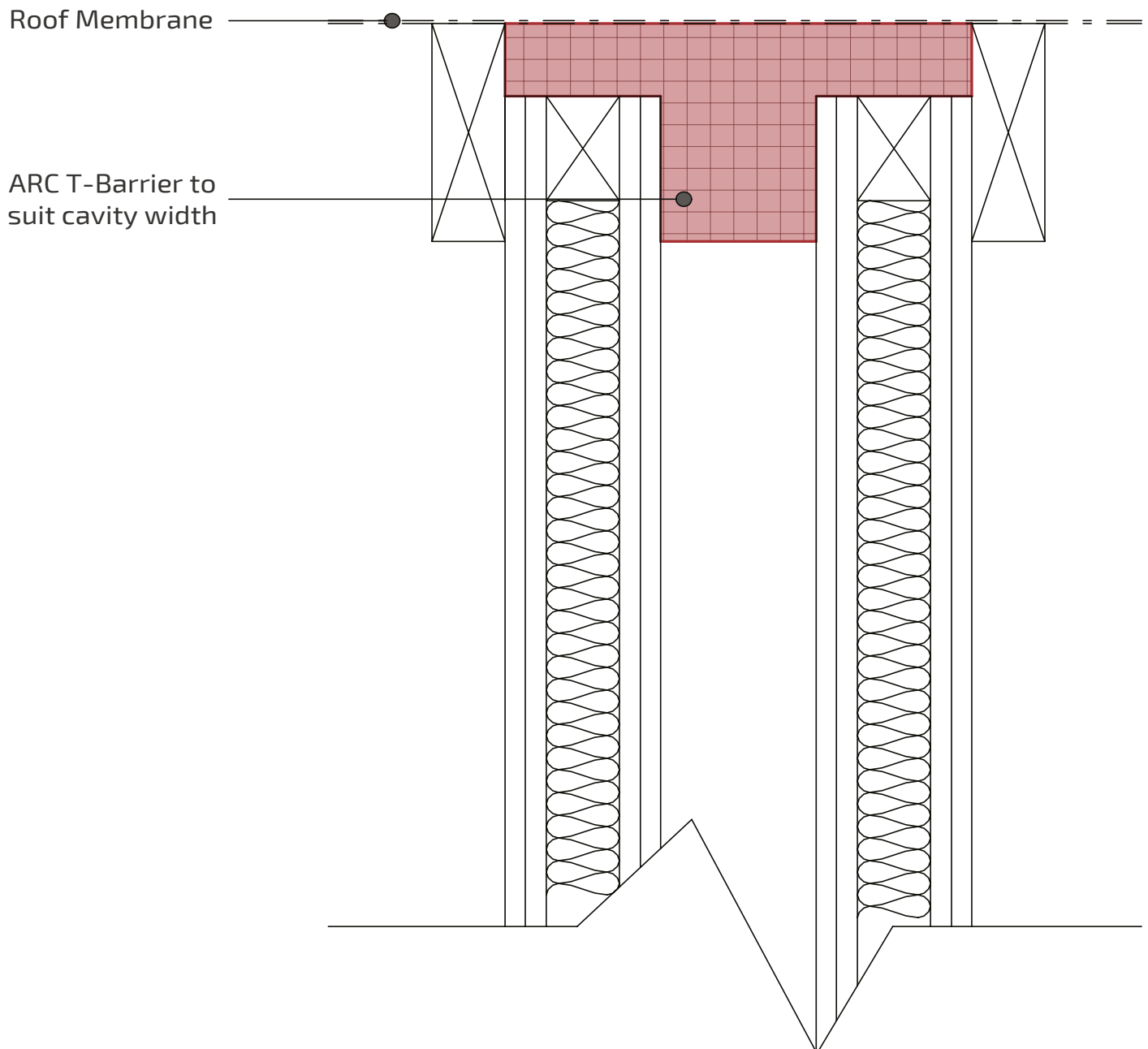
No CFCs or HCFCs are involved in the manufacturing process of ARC's rockfibre mineral wool insulation. Additionally, the mineral wool has a Green Guide rating of A+.

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.

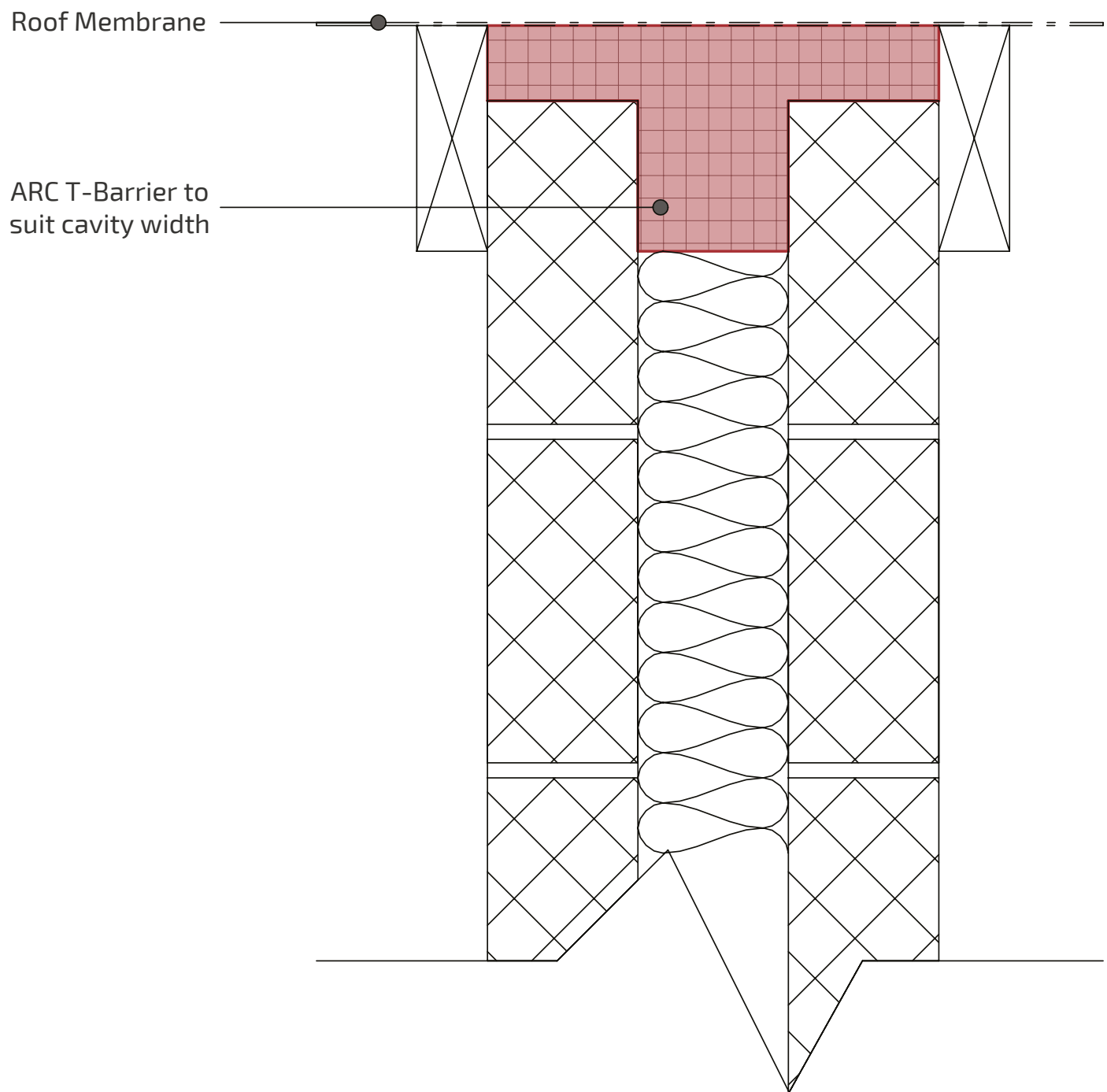
## Typical Detail Example

Please find a selection of detail drawings for typical details where the T-Barrier® Pitched Roof has been installed.

### ARC T-Barrier® Pitched Roof Spandrel Section



# ARC T Barrier® Pitched Roof Masonry Section



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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