

# THERMAL INSULATION CAVITY BATT

Thermal protection for masonry cavity walls



# THERMAL INSULATION CAVITY BATT

ROCKWOOL Thermal Cavity Batts are a semi-rigid full fill insulation solution for use in external and party masonry cavity walls.

The batts are quick and easy to cut, and provide a great fit, reducing installation time, avoiding gaps and cold spots, and maximising long-term performance. Water repellence stops the transfer of moisture from the outer to the inner leaf of the wall, preventing rot and mould. The batts are Euroclass A1 non-combustible.





## Advantages

- Non-combustible – Euroclass A1
- British Board of Agrément approved for use in all exposure zones
- Water repellent
- Quick and easy to install without gaps
- Does not require the use of cavity barriers

## Description

The batts provide thermal insulation for external walls as well as thermal and acoustic insulation for party walls, to meet with Part L and Part E of the Building Regulations.

The batts are quick and easy to install, providing a tight fit, without gaps, to maximise performance. Water repellence means that any moisture from the external leaf will not transfer to the inner leaf, helping to prevent rot and mould. The batts are also Euroclass A1 non-combustible, and do not require the use of additional cavity barriers.

## Applications

ROCKWOOL Thermal Cavity Batts are designed for use in 100mm masonry cavity walls to deliver thermal protection in residential extension and renovation work. The following tables show the typical construction details and their corresponding thermal performance, or U-value. The Thermal Cavity Batts are also used in masonry party walls to prevent the “thermal bypass effect”, and achieve a zero U-value, while also providing the required sound reduction.

ROCKWOOL Thermal Cavity batts have been examined by the British Board of Agrément (BBA) and granted Certificate 94/3079 for use in all exposure zones for domestic and nondomestic buildings that are up to 25m in height.

The NHBC accepts the use of ROCKWOOL Thermal Cavity Batt, other than in very severe exposure locations with fair-faced masonry, provided it is installed, used and maintained in accordance with the BBA Certificate, in relation to NHBC Standards, Chapter 6.1, External masonry walls.

## Performance

### Building Regulations Part L (Conservation of fuel and power)

Approved Document L 2013 edition came into force on 6th April 2014 and set out performance requirements for England. Scotland and Wales now have separate requirements, also shown in the table below, which states performance standards required for extension and thermal upgrade external wall applications.

P/A ratio	Part L1a 2013 (England)		Section 6 2015 (Scotland)		Part L1a 2014 (Wales)	
	Extension (W/m <sup>2</sup> K)	Thermal Upgrade (W/m <sup>2</sup> K)	Extension (W/m <sup>2</sup> K)	Thermal Upgrade (W/m <sup>2</sup> K)	Extension (W/m <sup>2</sup> K)	Thermal Upgrade (W/m <sup>2</sup> K)
Wall	0.28	0.55 (cavity) 0.30 (external or internal)	0.22	0.30	0.21	0.55 (cavity) 0.30 (external or internal)

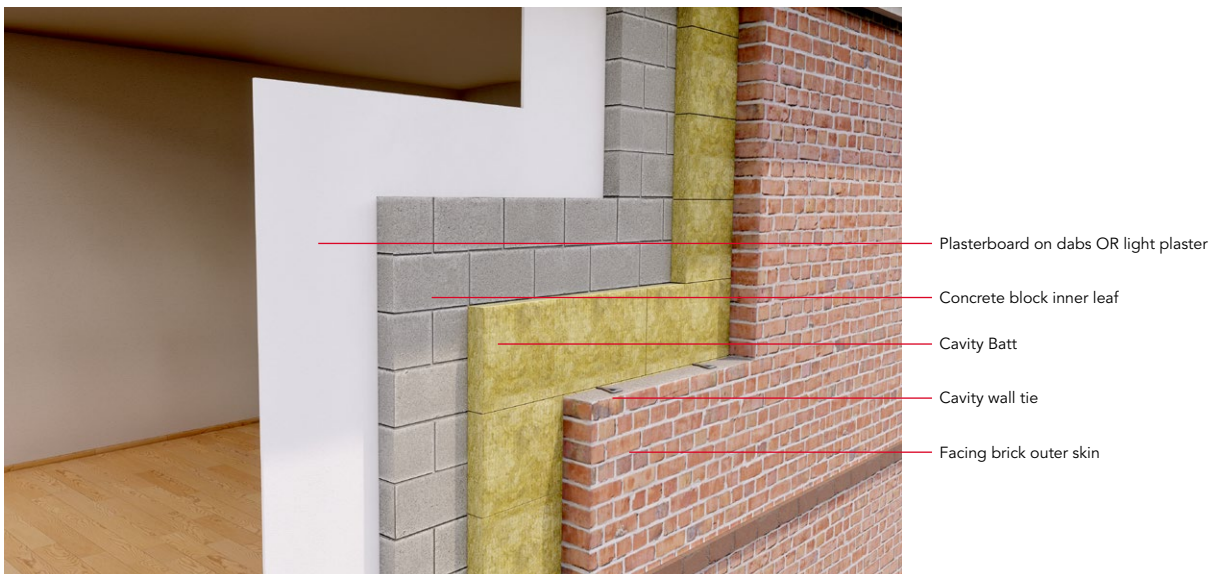
### Constructions to meet Building Regulations

#### Construction 1

102mm Facing brick outer skin, ROCKWOOL Cavity full fill, 100mm internal concrete block (various densities).

Internal finishes: light plaster or plasterboard on dab.

Inner block	Dense		Medium Dense		Aircrete Hi Strength		Aircrete Standard	
	1900-2250kg/m <sup>3</sup> 1.130 W/mK		1400-1450kg/m <sup>3</sup> 0.470 W/mK		750kg/m <sup>3</sup> 0.190 W/mK		600kg/m <sup>3</sup> 0.150 W/mK	
W/mK								
Internal finish	Light plaster	Plasterboard on dab	Light plaster	Plasterboard on dab	Light plaster	Plasterboard on dab	Light plaster	Plasterboard on dab
Cavity (mm)	U-value W/m <sup>2</sup> K	U-value W/m <sup>2</sup> K	U-value W/m <sup>2</sup> K	U-value W/m <sup>2</sup> K	U-value W/m <sup>2</sup> K	U-value W/m <sup>2</sup> K	U-value W/m <sup>2</sup> K	U-value W/m <sup>2</sup> K
100	0.32	0.30	0.31	0.29	0.28	0.27	0.28	0.27



**Construction 2**

Render on 100mm medium dense block outer, ROCKWOOL Cavity full fill, 100mm internal concrete block (medium dense or Standard Aircrete).

Internal finishes: light plaster or plasterboard on dab.

Inner block W/mK Internal finish	Medium Dense 1400-1450kg/m <sup>3</sup> 0.470 W/mK		Aircrete Standard 600kg/m <sup>3</sup> 0.150 W/mK	
	Light plaster	Plasterboard on dab	Light plaster	Plasterboard on dab
Cavity (mm)	U-value W/m <sup>2</sup> K	U-value W/m <sup>2</sup> K	U-value W/m <sup>2</sup> K	U-value W/m <sup>2</sup> K
100	0.31	0.29	0.28	0.27

The U-values shown in the constructions above are based on the following:

- Internal face of walls lined with either plasterboard on dab or 13mm lightweight plaster
- Block sizes assumed to be 440 x 215mm, mortar joints assumed to be 10mm wide
- Wall ties are stainless steel with a cross-sectional area of 12.5mm<sup>2</sup>

**Party wall thermal bypass - achieving a zero heat loss**

Building standards have also recognised that where party cavity walls between connected buildings are untreated, considerable heat can escape through them. A key feature of the SAP calculation is that party wall cavities should have a zero heat loss (U-value 0.00W/m<sup>2</sup>K). If these cavities are left unfilled and unsealed, a U-value of 0.05W/m<sup>2</sup>K will automatically be applied making it extremely difficult to meet the TER compliance.

Party wall construction	U-value (W/m <sup>2</sup> K)
Unfilled cavity with no effective edge sealing	0.50
Unfilled cavity with effective edge sealing only	0.20
Fully filled cavity and effective edge sealing	0.00

**Perimeter edge sealing details**

The table below details how to achieve perimeter edge sealing using the ROCKWOOL Thermal Cavity batt and PWCB.

<b>Perimeter Edge Sealing: ROCKWOOL PWCB</b>	
Party Wall Insulation:	100mm party wall filled with ROCKWOOL Thermal Cavity batt
Party Wall Blocks	100mm (min) each leaf (dense aggregate blocks density 1850-2300kg or lightweight aggregate blocks density 1350-1600kg)
Wall Finish to Party Wall:	Gypsum-based board (nominal mass 8kg/m <sup>2</sup> ) mounted on dabs with parged finish to block faces

**Party walls – Achieving Part E of the Building Regulations  
(resistance to the passage of sound)**

As well as delivering the required thermal performance for extensions and thermal upgrades in external cavity walls, ROCKWOOL Thermal Cavity Batt also achieves a zero U-value heat loss in party walls, and helps to achieve the required airborne sound reduction of 45dB to achieve Part E of the building regulations.

**Robust detail approval for use as acoustic insulation in masonry party wall constructions**

Robust Details Limited was formed in December 2003 in response to the housebuilding industry's request for an alternative to pre-completion sound testing, as a means of satisfying the sound insulation requirements of the Building Regulations. Below are the constructions to achieve the referenced Robust detail for masonry construction.

Robust detail wall reference - masonry	Party wall construction	Party wall cavity size (mm)
E-WM- 1	Dense blocks 1850-2300kg wet plaster	75-100
E-WM- 2	Light agg. blocks 1350-1600kg wet plaster	75-100
E-WM- 3	Dense blocks 1850-2300kg render faces/plasterboard on dab	75-100
E-WM- 4	Light agg. blocks 1350-1600kg render/plasterboard on dab finish	75-100
E-WM- 5	Besblock "Star Performer" dense aggregate cellular blocks/render/plasterboard on dab	75-100
E-WM-11	Lightweight 1350-1600kg agg. or nominated hollow or cellular blocks/render/plasterboard on dab	75-100
E-WM- 16	Dense aggregate blocks 1850-2300kg render/plasterboard on dab	75-100
E-WM- 18	Dense blocks 1850-2300kg wet plaster	100
E-WM- 19	Monarfloor Bridgestop System 100 mm Dense or lightweight blocks or nominated hollow or cellular blocks/render/plasterboard on dab	100

## Technical information

### Thermal

Tested to BS EN 13162 ROCKWOOL Thermal Cavity Batt has a thermal conductivity of 0.037 W/mK.

### Fire classification

Achieves a reaction to fire classification of A1, as defined in EN13501-1. Resistance to fire spread between and within cavities. ROCKWOOL Cavity Batt is non-combustible and therefore suitable for use in buildings of every purpose group. It also acts as an effective cavity barrier when tightly fitted between masonry leaves where an insulated wall connects with an uninsulated wall cavity.

### Water resistance and moisture

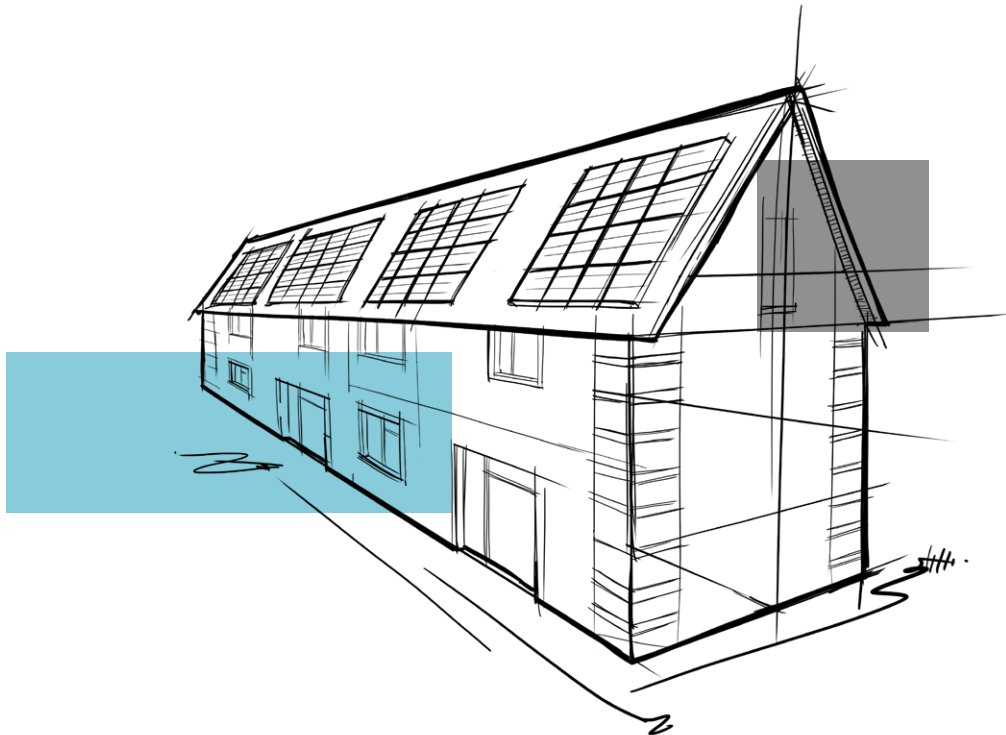
The product will resist the transfer of water across the cavity. The orientation of the water repellent fibres prevent water crossing the wall construction, provided the batts are correctly installed and sound building techniques are applied to the cavity wall construction (see installation notes). Any water penetrating the outer leaf will drain down the surface of the batts.

### Condensation

Will contribute to limiting the risk of condensation.

### Product information

Product	Thickness (mm)	Width (mm)	Length (mm)	Batts per pack	Coverage per pack (m <sup>2</sup> )	Lambda (W/mK)	R Value (m <sup>2</sup> K/W)
Thermal Insulation Cavity Batt	100	455	1200	6	3.28	0.037	2.7



## Sustainability

As an environmentally conscious company, ROCKWOOL promotes the sustainable production and use of insulation and is committed to a continuous process of environmental improvement.

All ROCKWOOL products provide outstanding thermal protection as well as four added benefits:



**Fire resistance**



**Acoustic comfort**



**Sustainable materials**



**Durability**

## Environment

Made from a renewable and plentiful naturally occurring resource, ROCKWOOL insulation saves fuel costs and energy in use and relies on trapped air for its thermal properties.

ROCKWOOL insulation does not contain (and has never contained) gases that have ozone depletion potential (ODP) or global warming potential (GWP).

ROCKWOOL is approximately 97% recyclable. For waste ROCKWOOL material that may be generated during installation or at end of life, we are happy to discuss the individual requirements of contractors and users considering returning these materials to our factory for recycling.

## Health & Safety

The safety of ROCKWOOL stone wool is confirmed by current UK and Republic of Ireland health & safety regulations and EU directive 97/69/EC: ROCKWOOL fibres are not classified as a possible human carcinogen.

A Material Safety Data Sheet is available and can be downloaded from [www.rockwool.co.uk](http://www.rockwool.co.uk) to assist in the preparation of risk assessments, as required by the Control of Substances Hazardous to Health Regulations (COSHH).



## Interested?

For further information, contact the Technical Solutions Team on 01656 868490 or email [technical.solutions@rockwool.co.uk](mailto:technical.solutions@rockwool.co.uk)

Visit [www.rockwool.co.uk](http://www.rockwool.co.uk) to view our complete range of products and services.

*Copyright ROCKWOOL September 2018.*



### The ROCKWOOL Trademark

ROCKWOOL® - our trademark

The ROCKWOOL trademark was initially registered in Denmark as a logo mark back in 1936. In 1937, it was accompanied with a word mark registration; a registration which is now extended to more than 60 countries around the world.

The ROCKWOOL trademark is one of the largest assets in the ROCKWOOL Group, and thus well protected and defended by us throughout the world.

If you require permission to use the ROCKWOOL logo for your business, advertising or promotion. You must apply for a Trade Mark Usage Agreement. To apply, write to:  
[marketcom@rockwool.com](mailto:marketcom@rockwool.com).

### Trademarks

The following are registered trademarks of the ROCKWOOL Group:

ROCKWOOL®

ROCKCLOSE®

RAINSCREEN DUO SLAB®

HARDROCK®

ROCKFLOOR®

FLEXI®

BEAMCLAD®

FIREPRO®

### Disclaimer

ROCKWOOL Limited reserves the right to alter or amend the specification of products without notice as our policy is one of constant improvement. The information contained in this brochure is believed to be correct at the date of publication. Whilst ROCKWOOL will endeavour to keep its publications up to date, readers will appreciate that between publications there may be pertinent changes in the law, or other developments affecting the accuracy of the information contained in this brochure. The applications referred to within the brochure do not necessarily represent an exhaustive list of applications. ROCKWOOL Limited does not accept responsibility for the consequences of using ROCKWOOL in applications different from those described within this brochure. Expert advice should be sought where such different applications are contemplated, or where the extent of any listed application is in doubt.

© ROCKWOOL 2018. All rights reserved.

### Photography and Illustrations

The product illustrations are the property of ROCKWOOL Ltd and have been created for indicative purposes only.

Unless indicated below, the photography and illustrations used in this guide are the property of ROCKWOOL Limited. We reserve all rights to the usage of these images.

If you require permission to use ROCKWOOL images, you must apply for a Usage Agreement. To apply, write to:  
[marketcom@rockwool.com](mailto:marketcom@rockwool.com).

**Notes**

**Notes**

September 2018

**ROCKWOOL Limited**

Pencoed  
Bridgend  
CF35 6NY

Tel: 01656 862 621

[info@rockwool.co.uk](mailto:info@rockwool.co.uk)

[rockwool.co.uk](http://rockwool.co.uk)

