Certificate No FM 02262

CI/SfB | | | Rm1 | (M2) |
May 2002

Firesafe application type	Thermal, fire
Construction type	Cavity walls

ROCKWOOL
FIRESAFE INSULATION

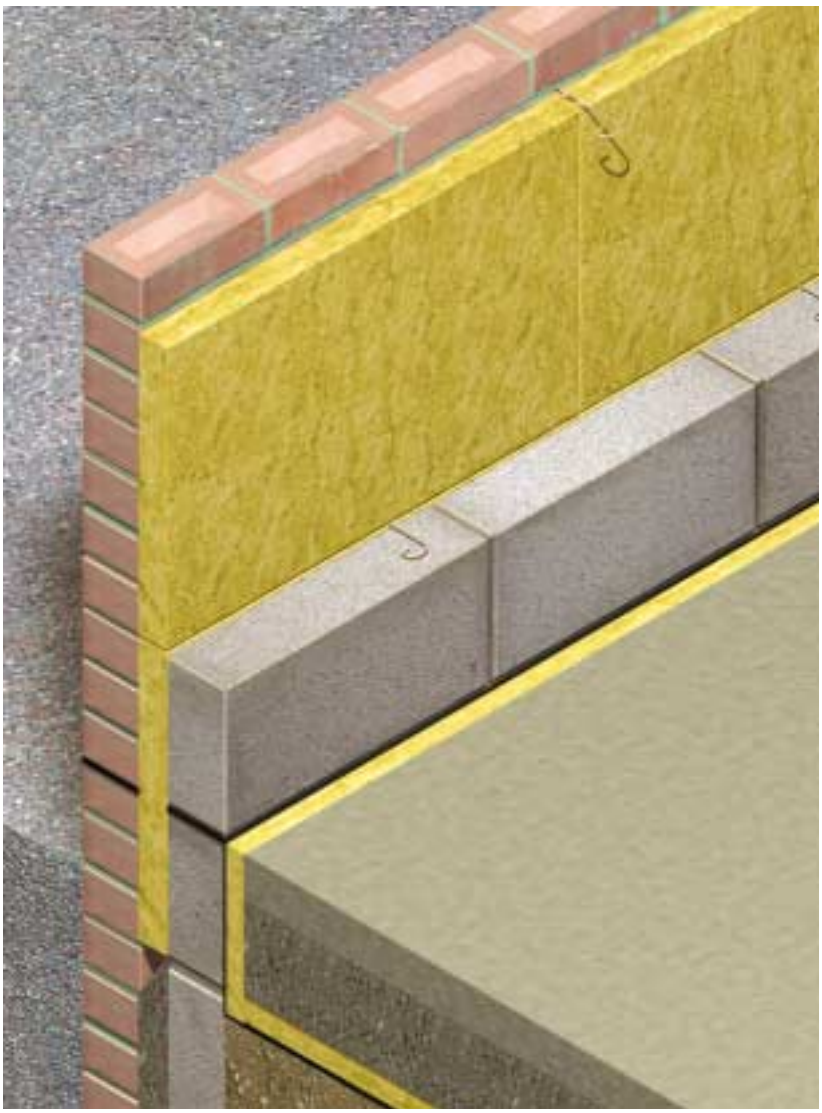
Cavity Wall Batts

Rockwool insulation for full cavity fill

Rockwool Cavity Wall Batts fully filling the cavity provide a completely reliable and cost-effective method of insulating new brick or masonry cavity walls. The lightweight batts considerably reduce heat loss without permitting water transmission from the outer to the inner leaf. The risk of condensation is also reduced and intermittent heating systems will be more effective.

Advantages

- Agrément certified for all exposure zones
- Act as a cavity barrier
- Water repellent
- Excellent thermal and fire insulation
- Superior fit against blockwork



Brick/block wall with second course of batts in place, showing outer leaf raised first and location of wall ties

NBS Plus

The following NBS Plus clauses include Cavity Wall Batts: F30:10, F30:150

Description, performance and properties

Standards

Rockwool Cavity Wall Batts have been examined by the British Board of Agrément and granted BBA Certificate 94/3079 for use in all exposure zones for buildings up to 12 m in height and for buildings over 12 m and up to 25 m in height in zones where the exposure factor does not exceed 120. To comply with the requirements of the Agrément Certificate, and to ensure trouble free performance, the masonry walls must be built in accordance with BS 5628: Part 3: 1985 or BS 5390: 1976, as appropriate, and the workmanship on site must comply with BS 8000: Part 3: 1989.

Rockwool Cavity Wall Batts comply with requirements of BS EN 13162: 2001 'Thermal insulation products for buildings – Factory made mineral wool (MW) products – specification, where appropriate.'

Note: Rockwool Cavity Wall Batts may be used above the BBA certified height, subject to an assessment by the BBA of the building in question.

Description

Dimensions
Cavity Wall Batts are 1200 mm long and 455 mm wide. Standard thicknesses are 65, 80, 90 and 100 mm. Other widths and thicknesses are available to order, depending on quantity. The product width shown above is suitable for wall ties placed at 450 mm vertical spacing.

Performance and Properties

Fire
Rated A1 when tested to EN 13501-1 classification using test data from reaction to the test.

'U' values
Insulation thicknesses relating to typical wall constructions are provided in the separate U Value section of the Rockwool Red Book.

Water resistance
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. The direction of the grain of the mineral wool ensures that the insulation will stop water crossing the cavity to the inner leaf.

Use in tall buildings
Agrément Certificate No. 94/3079 covers the use of Rockwool Cavity Wall Batts in buildings up to 12 m in height, and permits the use of Rockwool Cavity Wall Batts in buildings from 12 m to 25 m in height, provided the exposure factor does not exceed 120, and subject to a detailed project assessment by Rockwool Limited in association with the architect. A written approval form is to be completed and returned to Rockwool, together with an on-site examination of the work in progress by Rockwool Limited. Above-average site supervision is recommended during construction.

Workability and fitability
Cavity Wall Batts are extremely easy to install; cutting is simple (preferably with a long bladed knife and straight edge). The construction of the batts, and flexibility along their length and width, allows tight 'knitted' joints to be obtained easily on site.

If a Batt requires cutting, its width should always be 5 mm greater than the width to be insulated, eg wall-tie centres, ensuring a tight/closely butted installation.

Durability
Rockwool Cavity Wall Batts have been proven in service for over 30 years in all types of climate and degrees of exposure. They will give effective insulation for the lifetime of the building.

Environment
No CFCs, HFCs or HCFCs are used in the manufacture of Rockwool materials.

Construction

It is essential to design and build the wall in accordance with good building practice and the relevant Codes of Practice. (See BS 5628: Part 3: 1985 and BS 8000: Part 3: 1989.) The following guidance is given in good faith but is not intended to override any such good practice recommendations. Refer also to the appropriate Agrément Certificate and to Guidance Notes CIW 1 and CIW 2 available on request from the Marketing Services Department at Rockwool Limited.

Building Regulations
In the opinion of the British Board of Agrément, Rockwool Cavity Wall Batts will satisfy the following requirements of the 1991 Building Regulations:

B3 (4): Resistance to fire spread between and within cavities. Cavity Wall Batts are non-combustible and therefore may be used in buildings of every purpose group. They may also be considered as a cavity barrier when tightly fitted between masonry leaves where an insulated wall connects with the cavity of a wall without cavity insulation.

C4: Resistance to weather and ground moisture. Cavity Wall Batts do not absorb water by capillary action and may therefore be used in situations where they bridge the DPC, providing the construction is in accordance with technical solution 4.4.

Para 4.14 allows Cavity Wall Batts to fully fill the cavity of masonry walls (brick, block or dressed stone).

Construction and installation guidance

1 Designing the cavity wall

The use of Cavity Wall Batts does not affect the choice of ties to BS 1243 (or DD140), which should be selected according to structural requirements.

The outer leaf is the first line of defence against rain. Its effectiveness will be improved if attention is paid to the following points:

1 The width of the cavity should be designed after consideration of the dimensional tolerances of the components which make up the wall. An extra 5 mm on the nominal Batt thickness will normally be sufficient. (See also para 2(8).

2 Select porous bricks, which in periods of brief, heavy showers will absorb the moisture. A non-absorbent brick will channel water into the mortar joints (see BS 5628: Part 3: 1985, para 21.3.2.2).

3 Select a lime mortar mix that does not contain detergent-type plasticisers, which reduce the water resistance of the joints.

4 Specify weather-struck, flush or bucket-handle joints (Figure 1). Recessed joints increase the risk of water penetration. Ensure all bed joints and perpend joints in the external wall are fully filled with mortar.

5 Cavity trays should incorporate stop ends and have weep holes at approximately 450 mm centres.

6 Cavity trays should be continuous across closely spaced openings (Figure 3).

7 Vertical DPCs at wall openings should project at least 25 mm into the cavity (Figure 4). See Rockwool Data sheet 027 for details of the Rockclose insulated cavity closer.

2 Installing the batts

It is the contractor's responsibility to ensure that Rockwool Cavity Wall Batts are fitted in accordance with the recommendations of this data sheet.

1 The installation of the Batts should commence below the DPC to minimise cold bridging. The bottom row of ties should be at 450 mm centres. If necessary, the width of the first course of Batts can be cut to suit the height of the next row of wall ties. The width of cut Batts should always be 5 mm greater than the width to be insulated, eg wall tie centres.

2 It is recommended that the external leaf be constructed ahead of the internal leaf so that any mortar protruding into the cavity space from the back of the external leaf can be cleaned off before installing the batts.

3 Build up a complete section of the leading leaf to one course above the next row of wall ties spaced at max. 900 mm horizontally (Figure 5, overleaf). Ensure that all mortar joints are properly filled, particularly the perpends.

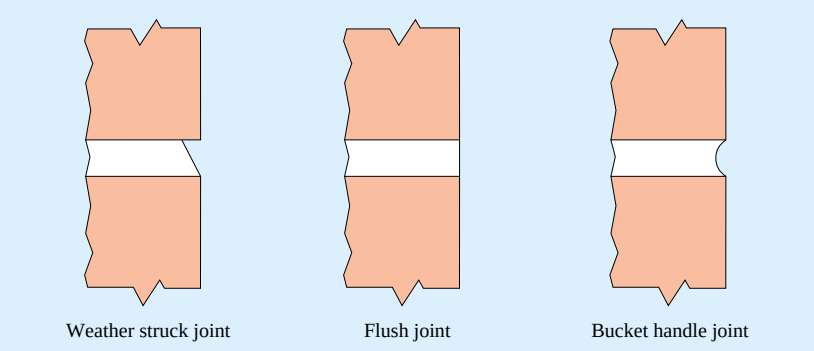


Figure 1 Recommended pointing

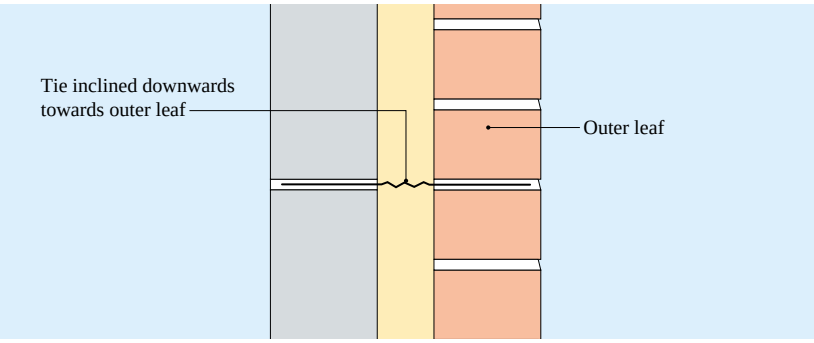


Figure 2 Correct wall tie installation

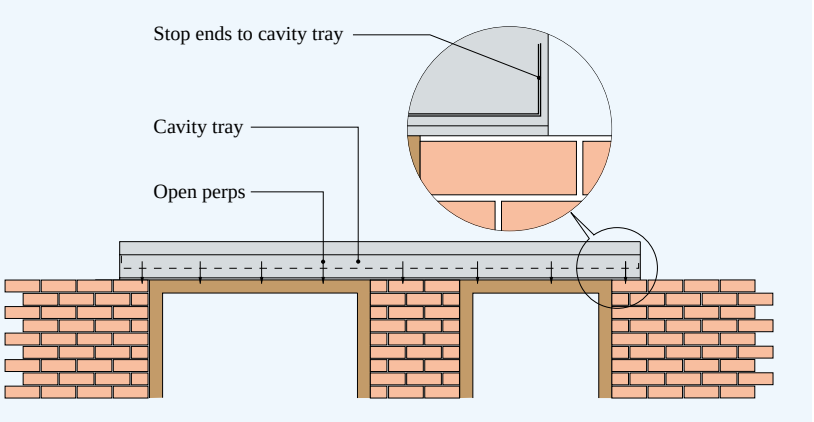


Figure 3 Cavity trays

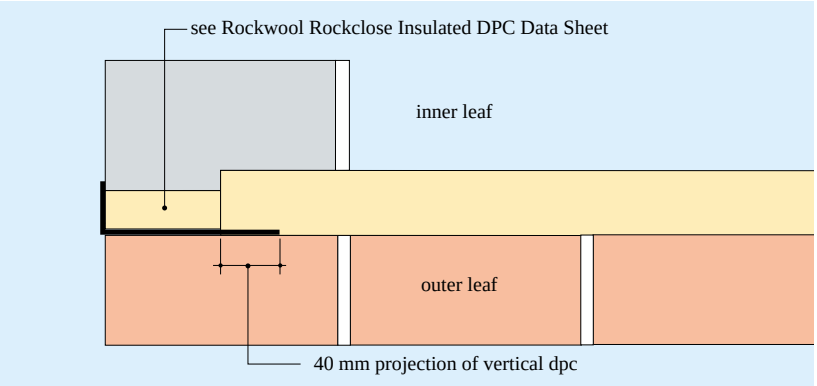


Figure 4 Vertical DPCs

Installation details and notes on the system

4 Before installation of each course of batts, excess mortar must be removed from the inside face of the leading leaf and mortar droppings cleaned from the exposed edges of the batts. This is made easier by the use of a cavity board (Figure 6). This sequence should be maintained progressively up to wallplate (or cavity tray) level. It is important that the insulation is carried to the highest level possible in either case (Figure 9).

5 Fit the Batts by compressing between the two rows of wall ties to form a clean and tight butt jointed course (Figure 7). Wall tie drips should be located centrally in the Batts (Figure 2). Ties must be inclined downwards towards the outer leaf.

6 It is essential that all joints between Cavity Wall Batts are clean and tightly butted.

7 Raise the second leaf to the same level as the Batts.

8 The as-built cavity width must not exceed the following dimensions:

Nominal Batt thickness (mm)	Maximum as-built cavity width (mm)
65	75
80	95
90	105
100	115

9 Repeat this sequence to the top of the wall (see Fig 9). If not, protect the top of the Batts with a cavity tray.

10 To prevent water penetration to the inner leaf during driving rain, it is essential that no gaps are left between the batts.

11 Cut the batts cleanly, using a sharp, long bladed knife and a straight edge.

12 Fit the batts closely around wall openings. Slit the batts neatly where additional wall ties occur. Do not impale or tear them. At corner joints, edges must be cut accurately to ensure close butting.

13 Cut the batts accurately to fit between wall ties, if not conventionally coursed. Ensure closely butted joints by cutting the Batts 5 mm larger in size than the wall-tie centres.

14 Avoid the build up of mortar on cavity trays.

15 Where make-up pieces have to be used, ensure that they are installed with the same direction of grain.

16 Protect the top of the cavity wall insulation at the end of the work period with a waterproof covering.

17 Store or cover Rockwool Cavity Wall Batts not in use and protect from site damage.

Specification clause

The full-fill cavity wall insulation is to be .....* mm thick Rockwool Cavity Wall Batts, manufactured by Rockwool Limited, Pencoed, Bridgend, CF35 6NY, installed as work proceeds in accordance with the recommendations of British Board of Agrément Certificate no. 94/3079.

* Insert thickness to correspond with the cavity width, within the tolerance limits shown in Table 1 in BS 6676: Part 2: 1986.

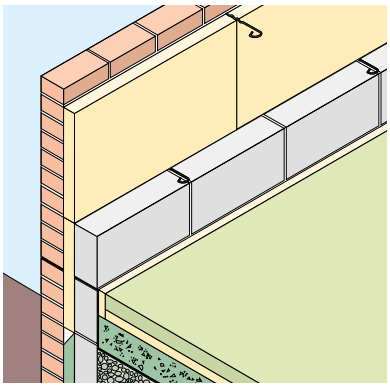


Figure 5

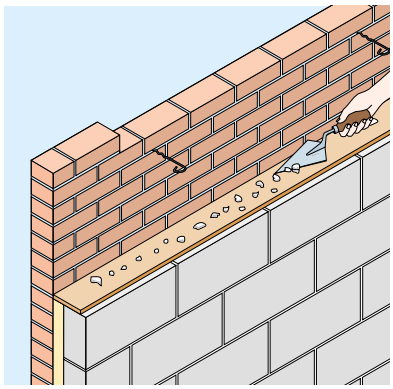


Figure 6

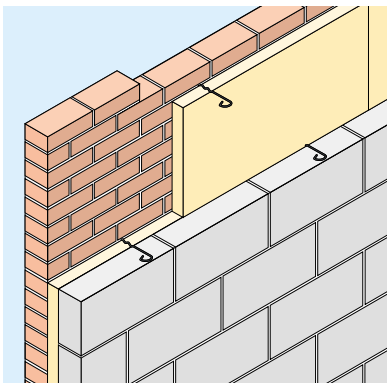


Figure 7

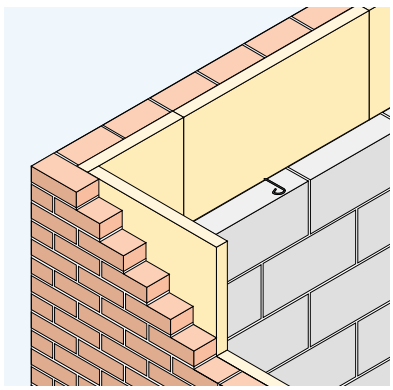


Figure 8 Batts close butted at corners

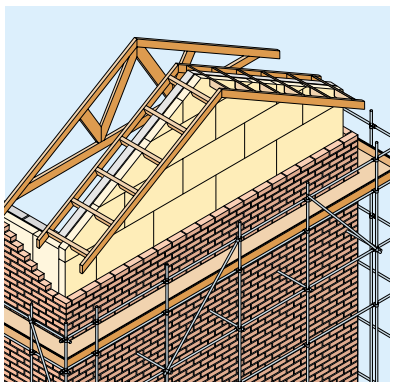


Figure 9 Installation of Batts in gable end wall

Health and safety

A COSHH Data sheet is available from Rockwool's Marketing Services Department.

Current HSE 'CHIP' Regulations and EU Directive 97/69/EC confirm that Rockwool fibres are not classified as a possible carcinogen.

Technical Helpline

Technical advice relating to Cavity Wall Batts is available from the Rockwool Technical Helpline Services Department on **0871 222 1780**.

ROCKWOOL
FIRESAFE INSULATION

Rockwool Limited
Pencoed. Bridgend. CF35 6NY

E info@rockwool.co.uk
www.rockwool.co.uk

Designed and produced by Communication Design Partnership

Printed by APB Colour Print Ltd.