

INSTALLATION GUIDELINES
IKO ENERTHERM ALU CW



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INSTALLATION GUIDELINES

IKO ENERTHERM ALU CW

ALU CW is only suitable for use in partial fill cavity wall constructions offering the highest thermal standards whilst maintaining a residual cavity offering protection from wind driven rain. IKO ALU CW insulation boards should only be fixed to the inner leaf for the wall to perform correctly.

General guidelines



Storage

The insulation boards should be stored in such a way as to prevent damage. The boards also need to be protected from the weather. If the insulation boards are stored for a longer period, it will be necessary to take measures to protect them from weather conditions such as sunlight.



Procedure

Always work on the insulation boards on a base which is dry and free of dirt. During processing, you need to take measures to prevent damp from penetrating inside the insulation boards. You should allow wet insulation boards to dry before you start work.

General

IKO Enertherm high-performance insulation for homes, offices and other buildings is the most immediate and efficient solution for making savings in energy consumption when considering a buildings structural make-up. Lower energy consumption means lower CO2 emissions, which are responsible for global warming. This means that good insulation can make a positive contribution to the environment. IKO enertherm can help in reducing this energy consumption. Thanks to special properties creating moisture and mould resistance and dimensional stability, IKO enertherm insulation boards have a long service life, while retaining their energy performance.

Design

Technical approval

IKO enertherm is a 100% CFC, HCFC or HFC-free insulation board with a rigid polyisocyanurate foam core, clad on both sides with various facings depending on the application and waterproof finishing required. With an optimum formulation of raw materials and production parameters, IKO enertherm has an exceptionally fine cell structure created by Micro Cell Technology.

Fire Safety

Fire safety is an important contribution to occupant safety and an important criterion for the building design. PIR insulation products meet a wide range of fire performance requirements as stipulated by Building Regulations.

IKO enertherm ALU CW has a reaction to fire class NP0.

The insulation board has a low to zero smoke emission rate and does not melt or drip.

This fire performance is an inherent part of the foam's cell structure.

The product does not prejudice the fire resistance properties of the wall. It is unlikely to become ignited within the cavity when used in context. If the fire does penetrate into an unventilated cavity, the amount of air present will be insufficient to support combustion, and flame spread will be minimal.

Moisture Tolerance

When the product is used in situations where it bridges the dpc in walls, dampness from the ground will not pass through to the inner leaf provided the cavity wall is detailed in accordance with Building Regulations/ Standards.

Cavity Wall Ties

Fixing manufacturers can advise on the correct wall tie for the building, but the basic types are:

1. Type 1: Heavy duty rigid ties suitable for most masonry cavity walls anywhere in the UK.
2. Type 2: General purpose flexible ties suitable for domestic and light commercial applications.
3. Type 3: Light duty ties suitable for housing where inner and outer leaf are similar thickness.

The wall ties used should conform to BS EN 845-1:2013+A1:2016 (Specification for ancillary components for masonry ties, tension straps, hangers and brackets).

IKO ALU CW with Masonry outer leaf

Installation Details

Requirements on the outer cavity leaf

Prior to installation, ensure the wall is dry, sound and free from contaminants. Mark out the Finished board position on the substrate

In order to enable any moisture that might penetrate the cavity to be drained away, sufficient ventilation openings must be present in the outer cavity leafs:

- above the start of the cavity on the foundation;
- above the lintels;
- above any other opening.

These drainage openings must be situated immediately above the waterproofing membrane (a strip of lead, EPDM or DPC film). The strips of this membrane must be laid with a minimum overlap of 20cm First run of board commences below DPC level to provide some edge insulation for the floor (Figure 1)

- Construct the inner leaf first, with the IKO enertherm insulation boards held in position using retaining clips
- Install wall ties with the drip of the tie downward, approximately half way across the residual cavity and wall tie slightly sloping down from inner to outer leaf
- For solid concrete floors: install the first row of wall ties in the inner leaf 600mm horizontal centres and a minimum of one course of blocks below the damp proof course(DPC) or 150mm below the top of the ground floor edge IKO enertherm insulation
- For suspended timber floors: install the first row of wall ties in the inner leaf at 600mm horizontal centres and 200mm below the top surface of the ground floor edge IKO enertherm insulation
- Raise the leading leaf two courses of blocks to the level of the next row of wall ties, normally at 450mm vertical centres. Clean any excess mortar from the inner leaf before installing the IKO Enertherm insulation boards
- Fit the next and subsequent rows of wall ties at maximum 900mm horizontal centres to retain the tops of the IKO enertherm insulation boards
- Additional ties may be required for structural stability and to ensure adequate retention of the IKO enertherm insulation boards against the inner leaf (Figure 2)

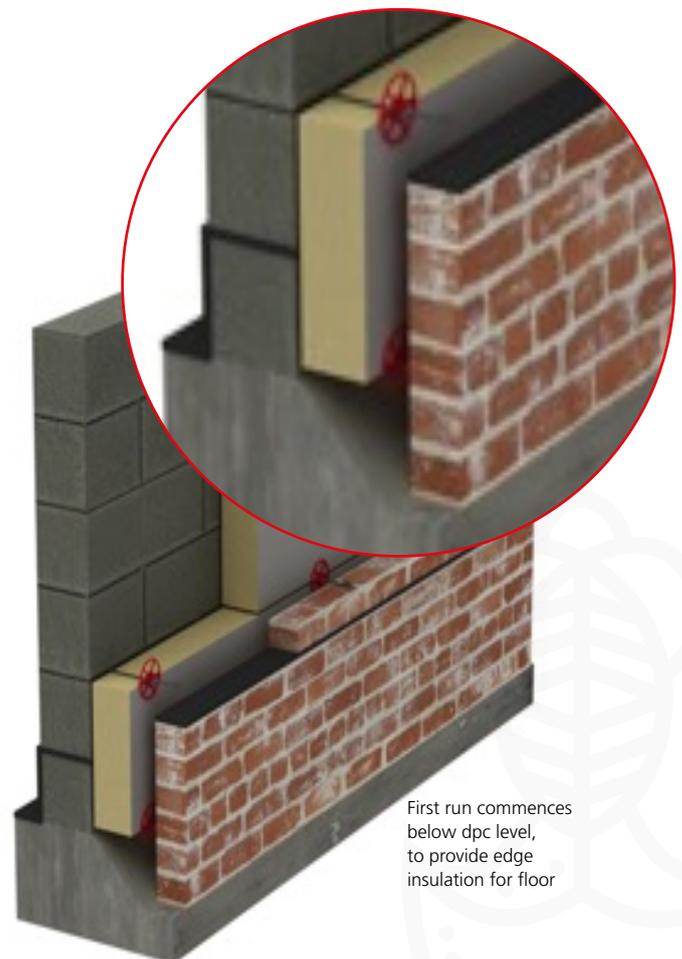


Figure 1 - Insulation installed below dpc level to provide edge insulation for floor.

- Build the outer leaf to the level of the IKO enertherm insulation boards and repeat the process
- Fit IKO enertherm insulation boards between the two rows of wall ties, tightly butted and secured by the retaining discs at a minimum of three points
- Install subsequent rows of IKO enertherm insulation boards with all joints tightly butted and taped with insulating tape 150mm in width, with vertical joints staggered in a brick-bond pattern. Boards with damaged edges or corners should not be used
- A double layer of IKO enertherm insulation boards may be used as long as vertical joints do not coincide and the thickest layer is positioned outermost
- At all stages of the work, ensure the residual cavity is kept clean and free from mortar droppings or other debris. Ensure all joints are accurately cut in order to maintain the continuity of the insulation layer
- Use of a cavity batten (Figure 3) or cavity board (Figure 4) is recommended in order to protect board edges and maintain a clear cavity

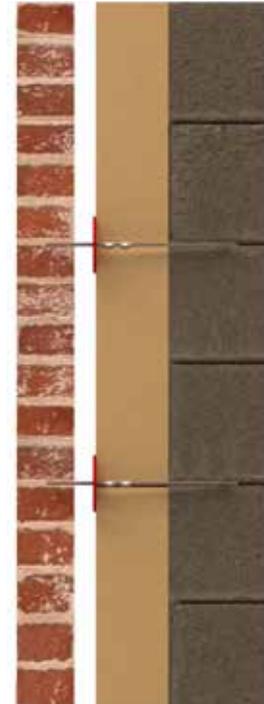


Figure 2 - Installation of wall ties.

Interior finish

The composition and properties of the interior finish are determined by the final use of the building and will closely depend on aesthetic criteria and fire safety requirements. All finishing materials must be according to the manufacturer's specifications.



Figure 3 - Use of cavity batten.

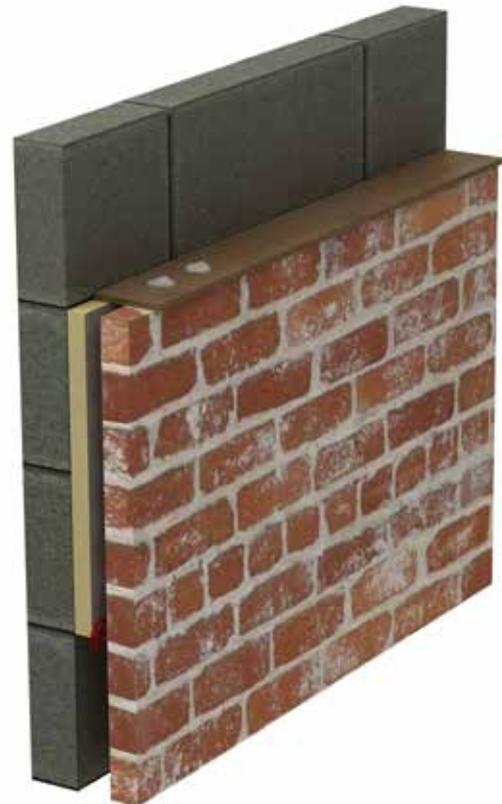


Figure 4 - Use of cavity board.

Site working practice

At the completion of each day's work, or whenever work is interrupted for extended periods of time, board edges and joints should be protected. Newly erected masonry should be covered to protect the insulation and to prevent the mortar being washed out of the joints by rain. Walls should be prevented from becoming saturated by covering the top of the wall with waterproof sheets; this is particularly important to minimise the incidence of efflorescence and lime bloom. When any working platform is not in use, the inner board should be turned away from the wall to prevent the splashing of the wall face.