SAFEGUARD
MAKING BUILDINGS DRY

Installation Guide

Internal insulation system for solid walls

ultrotherm®

Installation guide

Ultrotherm® is an internal insulation system for solid walls. It allows walls to be insulated without costly alterations to skirting boards, windows, covings and radiators. Although only 12mm thick, Ultrotherm® typically reduces heat loss through 9" solid brick walls by 40%, creating a more comfortable living environment and reducing energy bills. Ultrotherm® meets Building Regulations for use where it is not functionally or technically possible to install thicker insulation systems.

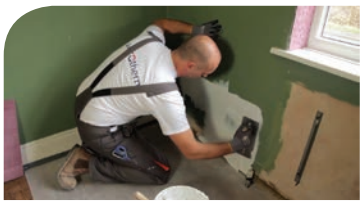
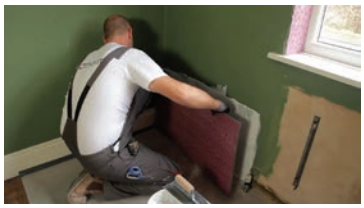
Ultrotherm® is supplied in convenient flexible tiles that allow it to be installed around awkward shapes and curves. Once applied, Ultrotherm® is plastered to create a wall surface ready for decoration.

1 Preparation

Prepare wall surfaces by removing wallpaper or flaky paint. PVA adhesive can be used if necessary to stabilise the surface of the wall. Ultrotherm® can be installed with or without removing skirting boards and coving. Radiators should be lifted from their brackets but the brackets themselves do not need to be removed.

2 Installing Ultrotherm® tiles

Apply Ultrotherm® adhesive to the wall surface directly from the container using a 6mm notched trowel. Once sufficient adhesive has been applied, an Ultrotherm® tile is pressed firmly on to the wall. Apply further adhesive and tiles until the wall is completely insulated. Ultrotherm® tiles should be cut around radiator brackets. These can be covered with removable strips of Ultrotherm® once the wall has been plastered. Ultrotherm® is easily cut using decorator's scissors.

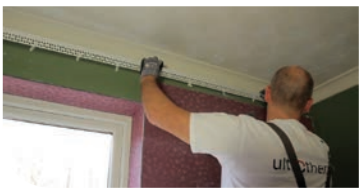





3 Installing Ultrotherm® without removing skirting boards or coving

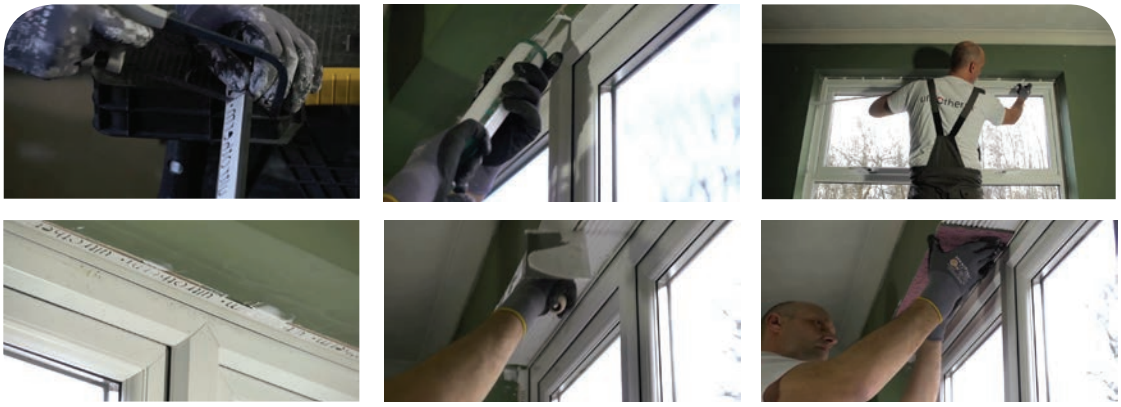
A 15mm plastic trim bead is bonded to the plaster above the skirting board and beneath the coving using Ultrotherm® detail adhesive. The insulation tiles are then located tightly into the trim bead and pressed firmly into the wall adhesive.



4 Installing Ultrotherm® insulated trim beads and reveal tiles

Ultrotherm® insulation beads are installed with the insulation strip in contact with the window or door frame using Ultrotherm® detail adhesive. Ultrotherm® adhesive is applied to the window or door reveal using a 6mm notched trowel. Ultotherm® reveal tiles should be cut to the required size, located tightly into the insulated trim beads and pressed firmly into the wall adhesive.



5 Plastering Ultrotherm®

The joints between the Ultrotherm® tiles must be covered with fibre mesh tape. Ultrotherm® angle beads are used to form external angles.

In most cases Ultrotherm® is plastered using Thistle Board finish or Multi-finish. The first step is to apply a base coat of plaster that fills-in the circular holes behind the mesh covering. The plaster should be mixed to a thicker consistency than normal for this coat. It is also possible to build-up layers of plaster in a more traditional style. Applying a coat of 'Hardwall' plaster before the skim coat increases impact resistance. Once the filling coat has started to set, two further coats of plaster skim are applied to the wall.

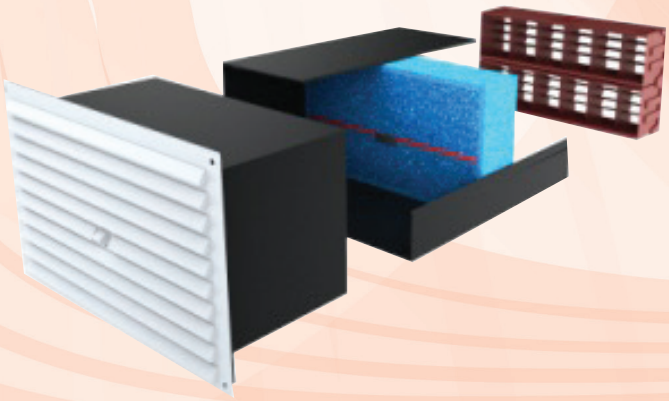
6 Re-instatement stage

Once the plaster has dried, skirting boards, covings and radiators can be reinstated. Care should be taken not to over-compress Ultrotherm® when securing skirting boards or other items back to the wall. Before re-hanging radiators, Ultrotherm® should be placed over the brackets to prevent cold spots. This also allows the radiator brackets to be easily removed if necessary. Walls can be decorated after approximately two weeks or once the plaster has fully dried.

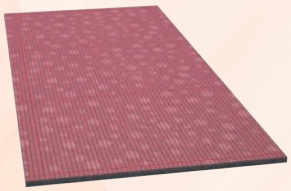


Ventilation

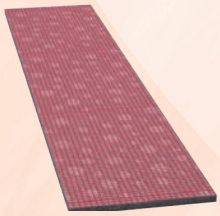
Where insulation is installed it is also important to consider ventilation requirements. If it is necessary to increase ventilation then a passive Ultrovent® air brick ventilator should be installed. Ultrovent® is designed to ventilate bedrooms and living rooms where the constant background ventilation it provides allows water vapour to escape in a controlled way. One air brick ventilator is usually sufficient for a single room of up to 20m^2 floor area. Its unique triple action filter reduces condensation, noise transmission and heat loss through the ventilation duct. Where higher ventilation rates are required a heat recovery ventilation unit should be considered.



System Components



Ultrotherm® 12mm tile.
Each tiles measures 1000 x 500mm.
Supplied in packs of 10 (5m^2)

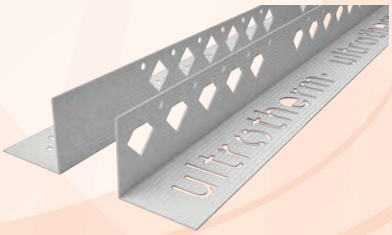


Ultrotherm® 8mm reveal tile for window and door reveals. Each tiles measures 1000 x 230mm.
Supplied in packs of 5 (1.15m^2).

Ultrotherm® adhesive. Used for bonding Ultrotherm® tiles and Ultrotherm® reveal tiles.
Supplied in a 10kg tub (covers up to 10m^2 or 20 Ultrotherm® tiles).

Ultrotherm® detail adhesive. Used for bonding Ultrotherm® insulated plastic trim beads and plastic angle beads.
300mm tube (covers up to 0.3m^2).

Ultrotherm® insulated plastic trim beads for use around window and door frames to reduce cold bridging. Also allow windows and doors to be replaced without damaging the insulation system.
Supplied in 2.5 metre lengths.

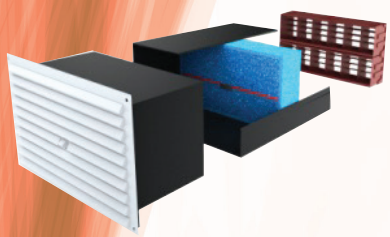


Ultrotherm® plastic angle beads for use around all external angles.
Supplied in 2.5 metre lengths.

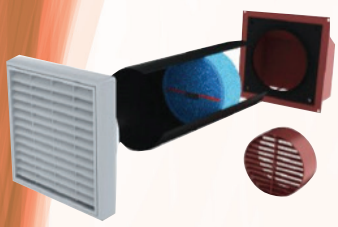
Ancillary Products

Ultrotherm® external water repellent. For application to external brickwork to reduce water penetration in to the wall structure. Applying Ultrotherm® external water repellent in conjunction with Ultrotherm® insulation can improve the 'U' value of a solid brick wall by up to 50%.

Ultrotherm® vapour barrier paint. For use where it is necessary to reduce water vapour movement through Ultrotherm® insulation. Ultrotherm® vapour barrier paint is applied directly to the finishing plaster and can be over-painted with most types of paint.



Ultrovent® air brick ventilator. Ultrovent® air bricks provide passive background ventilation dissipating up to 2.8 litres of water vapour over a 24 hour period.



Ultrovent® core drill and high rise ventilator. Ultrovent® core drill and high rise ventilators provide passive background ventilation dissipating up to 1.2 litres of water vapour over a 24 hour period.

For more information regarding Ultrotherm® or to view installation videos visit www.safeguardultrotherm.com

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