

Roof Applications...

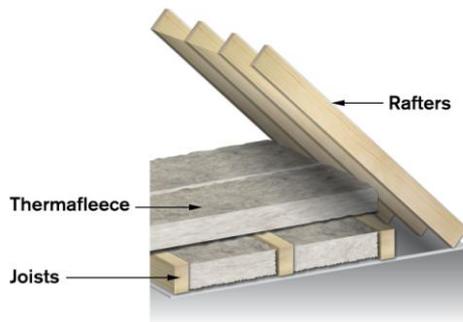
Insulating roofs with Thermafleece is one of the most effective ways to significantly reduce energy consumption within buildings. Thermafleece is extremely versatile and can be used in many roof applications as an alternative to conventional insulation.

Lofts

Insulating at ceiling level within the roof space is the easiest way to reduce heat loss through the roof. Insulation can be installed in loft spaces to a large depth that allows high energy efficiency to be achieved.

Thermafleece is easy and safe to install in any loft situation. For existing buildings, we recommend a minimum depth of 240mm of our insulation in the loft space. Larger depths may be required to comply with current Building Regulations.

Fit first layer of insulation between the joists ensuring all joints are close-butted to avoid air gaps. Cross-lay additional layers of insulation to reduce thermal bridging.

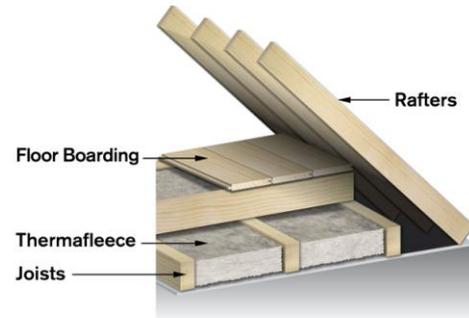


Where a low vapour resistance membrane is used, take insulation over the wall plate to meet the wall insulation and push tight against the breather membrane. Refer to the membrane manufacturer for guidance on eaves ventilation.

Where a high vapour resistance membrane is used, eaves ventilators are required. Care must be taken to avoid blocking the ventilation air path.

Thermafleece can be used to insulate the floor of a boarded loft space. Fit the first layer between joists ensuring all joints are close-butted to avoid air gaps.

Fit additional layers of Thermafleece between cross laid joists following the same procedure as before.



Insulation should not be fitted between joists under the water tanks. Additional layers of insulation should be installed along the sides of the tank to meet the lagging around the tank.

As with other insulation products, it may be necessary to de-rate electrical cables buried in insulation. BS 7671: 2008 suggests that where wiring is completely surrounded by insulation, it may need to be de-rated to as low as half its free air current carrying capacity. Guidance should be sought from a qualified electrician.

Down-light covers that meet Part F and Part B of the Building Regulations should be used where appropriate.

Should airtightness performance be required, use a separate and sealed air leakage barrier attached to the ceiling joists.

Warm Roof

THERMAFLEECE is suitable for timber rafter depths from 50mm upwards.

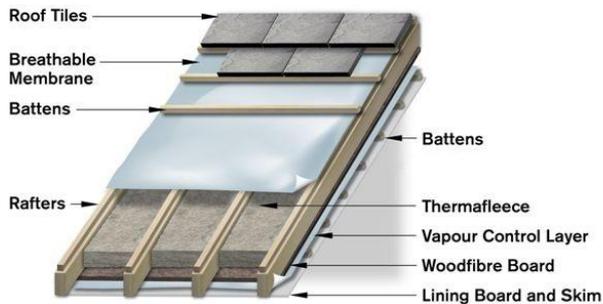
Rafter Level Insulation

Fit insulation under the roofing membrane. Counter battens and tiles can remain in place during installation. Installation will depend on the type of roofing membrane used.

By using a low vapour resistance membrane, the insulation can fully fill the rafter space without the need for ventilation above the insulation.

Roof Applications...

When using a high vapour resistance membrane leave a ventilation space between the insulation and the membrane. Ensure a 50mm continuous ventilation opening at every rafter spacing and 25mm at the eaves with 5mm continuous gap each side of the ridge.



Obstructions to the roof plane should have ventilated air spaces top and bottom of each rafter to maintain the air flow in the rafter.

If the warm roof has dwarf side walls, the vapour control layer must be constructed to the same standard adopted for the ceiling.

Insulation Between and Under Rafter

If higher insulation performance is required, additional insulation can be installed under the rafters. Fix a counter batten against the underside of the timber rafter and cross-lay Thermafleecce between the battens.

A wood fibreboard can be used under the rafter as an alternative to Thermafleecce. Fix the wood fibreboard to the underside of the rafter and apply a vapour control membrane to the warm side and fix the plasterboard to the counter batten.

A service void is created by fixing a wood fibreboard to the underside of the rafter using a counter batten. The void can be converted to a low emissivity void by applying an Low Emissivity Membrane to the underside of the insulation.

Engineered "I" Beam Rafters

Install Thermafleecce between the rafters supported on a breathable racking board, OSB or plywood sheets fixed to the flange of the lower "I" Beam component.

Install Thermafleecce from the top between the "I" Beam rafter before fixing the sarking or racking board layer or plywood. Counter battens are placed on top of a breather membrane laid across the OSB or plywood.

Where a service void is required, plasterboard or other suitable lining can be incorporated by battening to provide a service zone from the underside of the "I" Beam rafter.

A vapour control layer must be applied to the warm side of the insulation unless using suitably sealed vapour controlling plywood, OSB is used.

To avoid puncturing the vapour control layer, the services should be installed on the warm side of the VCL. Care is needed when dormer windows, roof lights or other elements disrupt the ventilation space.