

Polyurethane foam applied to the underside of the roof which bonds slates and tiles to each other and to structural or supporting timbers to replace the anchorage of fixing nails. It is a much less costly alternative to re-roofing and can be applied to slates, tiles and other various roofing coverings.

It permantly cures the problems of nail fatigue and makes the roof much more resistant to storm or impact damage. Because it is liquid when applied, it seeks and seals any unwanted air leakage that may occur, preventing the ingress of wind-driven rain, snow and dust and dramatically reducing heat loss.

The foam can be applied to various depths. When sprayed to a depth of 85mm the U-value of a typical roof with 100mm fiberglass at ceiling level is reduced from 0.34W/m<sup>2</sup>K to 0.16W/m<sup>2</sup>K. By installing the insulation at rafter level it keeps the loft void warmer and prevents condensation build-up which otherwise occurs when increasing insulation at ceiling level. The warmer, drier, cleaner roof space eliminates the risk of pipes and tanks freezing.

The water vapour resistance of the spray-applied foam is sufficient to prevent interstitial condensation but allows the battens, which are covered on three sides by the foam to 'breathe' and by preventing wind-blown rain and snow the battens stay dry. The spray-applied foam meets Class 1 Surface Spread of Flame when tested to BS 476 Part 7.

The spray also slows the deterioration of tile/slates by frost. On the underside of the covering, frost damage is eliminated. On the weather side the frequency of the freezing/thawing cycle is reduced. Slates and tiles will be less prone to damage by impact as the foam distributes the forces. Where slates and tiles are damaged after installation, they may be replaced by cutting away the foam from the underside, replacing the slate or tile and re-treating the affected area. Aerosol cans are suitable for small areas.

It has been found to be particularly suitable for historic and listed buildings where it is important to maintain the original character of the roof.



**Gar Insulation Ltd**  
Approved installer, cert no;10012



**SAVE 40% on your heating costs.**

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## Gar Insulation Ltd and What We Provide.

Gar insulation is a progressive and young insulation company supplying and fitting cavity wall certified products into new and existing homes. We will assure that the most up to date and effective products which will give you the greatest return for your investment will be used on your home.

All our customers receive a free consultation with a house or site visit to examine and discuss your individual needs to exploit the maximum benefit from insulating your home. On completion of all the work, the customer will receive a written guarantee for Twenty five years.



Korefill is a complete high density polystyrene bonded bead solution to fully insulate a cavity wall constructed building. The expanded polystyrene bead is durable and will last the lifetime of the property. It will not settle or crack and will greatly improve the thermal efficiency of your home. Korefill will meet the new building regulations Part L Certificate no: 07/0293.

Whether you are insulating an empty cavity or upgrading existing board insulation in the cavity, the bonded bead will significantly retain the heat generated in your home to last longer. In most cases the house is drilled from the outside at ceiling height on all levels and also under each window. The holes are 20mm in diameter and are refilled with white sand and cement to match as closely as possible to the original finish of the house. In homes where there is brick facing on the outer leaf the mortar joints are drilled to reduce the possibility of damage to the brick or drilled from the inside where appropriate.

The grey bonded bead is a more efficient alternative and effective way of insulating a new construction, allowing for a faster build program without compromising on quality. With the tried and tested drill pattern a total fill is guaranteed throughout the entire building. The house is insulated when all services are complete, including the meter box ducting, plumbing and any external electrical work which is going through the cavity, this ensures that no gap will be left unfilled.

## By using Bio-Based 501s Spray Foam Insulation Open Cell, a complete and long lasting insulation solution is achieved.

The foam will adhere to most building surfaces typically found in a wall or roof of a domestic building once dry and clean.

Once installed Spray Foam insulation assists in increasing thermal resistance, provides an airtight barrier, helps in minimizing sound from external noises and can reduce the risk of moisture accumulation within the external structure.

Spray Foam Open Cell insulation can be used on walls, attic ceilings, pitched roofs & timber floors in residential, commercial and industrial properties.

When Spray Foam Insulation is used with other responsible building practices, you can typically save 30 - 50% on heating and cooling costs. That means you use less energy, reducing your CO2 emissions and saving you money.

Structures insulated with Spray Foam Insulation are healthier, more comfortable and more durable. Spray Foam Insulation expands upon application forming a sealed thermal envelope that will not sag, settle or deteriorate over time.

Spray Foam Insulation is suitable for use along the ceiling joists from the attic floor. The insulation must be separated from all habitable rooms by 12.5mm plasterboard or similar.

Due to the airtight barrier created by Spray Foam Insulation, less energy is employed to either heat or cool your building, saving up to 50% on monthly costs. It keeps conditioned air inside and unconditioned air outside.

When installed, Spray Foam expands 100 times its original size to completely fill all voids in walls and roof. It helps provide a sealed thermal and airtight building envelope, eliminating heat loss and creating a comfortable healthier indoor environment.

