



beauty & style, naturally

# Insulation Advice

The choice of insulation provision can vary widely and careful thought should be given as to what regulations (if any) need to be complied with and what you want to achieve by insulating. Timber itself is a very good insulator (it is the primary building material in cold northern Europe for instance). If, for instance, you have an office or summerhouse/study in your garden which you use for 40 or more hours per week (usually during the day), then you do not need to spend money which will take you hundreds of years to recoup in energy savings, but you do need the cabin to heat up quickly, cost little to maintain that heat and be comfortably warm in the winter and cool in the summer. In this instance the amount and type of roof insulation is the critical thing.

For permanent homes or commercial buildings The Building regulations say “reasonable provision shall be made for the conservation of fuel & power in buildings”. Over the years the interpretation and implementation of this has become more onerous and complex until we have today arrived at the Energy Rating Method which uses the Government’s Standard assessment procedure (SAP). This requires a huge amount of questions to be answered and fed into a computer programme which will calculate the resultant rating. These calculations need to be done individually on each building and we offer service which costs between £150 and £275 per calculation.

The regulations also say “The secretary of state shall approve minimum energy performance requirements for new buildings in the form of target CO2 emission rates”. “TER represents the minimum energy performance requirements specified in regulation 17B and is expressed in CO2 in units of kg/m<sup>2</sup> of floor area per year “. Your method of heating the rooms & hot water, lighting, cooling and ventilation is taken into consideration in the calculation.

Costs can vary and insulation nowadays is not cheap. To get the best value for money we can look with you at your individual case. The following details show a typical range of alternatives. Each case is different as a large number of factors have an effect on the final outcome.

The following is a summary of our most widely used specifications but these do not fit each case and we are constantly upgrading and altering the details to accommodate individual requirements.

## FLOOR

Sterling board or plywood joist trimmers + Foil-Tek membrane laid over the joists to prevent loss of placed insulation, 100mm Crown wool or similar fibrous insulation placed between joists, 31mm floorboards on top. 0.34W/m<sup>2</sup> K

Sterling board joist trimmers or Frameshield breather membrane as above then 100mm polystyrene granules between joists, 31mm floorboards on top. 0.38W/m<sup>2</sup> K

Foil-Tek double normally better than 0.18 - 0.25W/m<sup>2</sup>K (Calculation of floor area necessary)

## WALLS

230mm Framewall comprising 32mm Dee log, 25mm Tile lath, 8mm OSB, 150 x 50mm studding, Foil-Tek & 18mm matchboard on top. 0.17W/m<sup>2</sup>K.

50 x 25mm studding filled with 40mm double foiled insulation and dry walled. 0.40W/m<sup>2</sup> K

80 mm Glass fibre, Foil-Tek double insulation and tongue & grooved with 16mm boards. 0.35W/m<sup>2</sup> K

External log, breather membrane, 9mm OSB, air gap and 100mm foil faced rigid foam, air gap, membrane and 28mm T&G gives 0.18W/m<sup>2</sup> K or better.

## CEILING/ROOF

Matchboard Vee Roof boards, 50mm twin foil foam, breather membrane and covering – 0.32W/m<sup>2</sup>K.

Matchboard Vee Roof boards, 200 x 50 spacer rafters, 150 Kingspan (or similar) 50mm air gap, 18mm sheathing plywood, breather membrane topped with Bitumen shingles. 0.16 W/m<sup>2</sup>K.

Matchboard Vee Roof boards 20mm Air gap, 4mm 160mm foil faced rigid foam, 50mm Cavity, 18mm Ply, breather membrane and roofing felt – proportional area method 0.18W/m<sup>2</sup>K.

Kingspan TEK Haus Structural Insulated Roof Panel. Gives 0.20W/m<sup>2</sup> K.

## E&OE

**Reference should be made to The Building Regulations Document L1 published by HMSO. You can ask for help from the Local Authorities Building Control Office or advice from an Architect or other building professional.**

**Alternatively Rural Log Cabins Limited technical department offer advice on options: telephone 01827 880697 or by E-Mail at [sales@rural-log-cabins.co.uk](mailto:sales@rural-log-cabins.co.uk)**

Notes based on: **The Building Regulations Approved Document L1**

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