

## The Jargon of Insulation

The world of insulation has its own arcane jargon that needs to be mastered when specifying the most efficient materials and fittings.

There are two main ratings used for estimating heat loss, - the R rating, and the U value. It is important to know what these ratings mean in practical terms. Any manufacturer of external fixtures such as doors and windows should know the R or U value of their products. If you are looking for the lowest heat loss, all you need to know is:

R value - the higher the better

U value - the lower the better

### R Value

R gives us the resistance - the capacity of a material to resist the transmission of heat. However what we need in order to calculate heat loss, is the inverse of this - its capacity to transmit heat. This is given by the u-value.

### U Value

The u-value is easily calculated by dividing one by the R value. This is written as  $W/m^2K$  or  $W/m^2C$  and is the watts of energy transmitted by a square metre given a one degree difference in temperature between its two sides.

Armed with this information, you can make direct comparisons between different products and materials. The difference in thermal performance between seemingly similar products can be dramatic, which is why it is so important to know the R and U values.

