



 **Sheffield**  
**Insulations**  
an **SIG** company



## ABOUT SHEFFIELD INSULATIONS

SHEFFIELD INSULATIONS IS THE UK'S NO. 1 SPECIALIST DISTRIBUTOR OF INSULATION AND RELATED PRODUCTS TO THE CONSTRUCTION INDUSTRY, PART OF THE INTERNATIONAL SIG GROUP, AND THE PIONEERS OF INSULATION DISTRIBUTION NEARLY 50 YEARS AGO.



### *The widest product ranges*

We offer quality, brand name structural products from leading manufacturers, including thermal, fire and acoustic insulation, specialist dry lining and fire protection ranges, via a nationwide branch network.

Our size and strength means we have the widest, most comprehensive ranges of products in the country with unrivalled stock availability of major brand name and new product lines. As well as 'breaking bulk' and supplying the whole range of insulants, we can also provide the additional building products and accessories you need.

Our trade counter facilities also provide an efficient collection service.

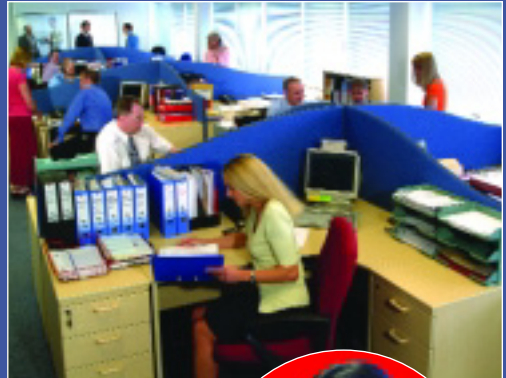


### *Quality service*

Our success is attributable to the strong relationships we have with our customers and a service history that is second to none; our continued investments in stocks, warehouses, vehicles and quality people; and our partnerships with suppliers who produce quality products that exceed industry standards – all providing a strong framework for us to move forward into the future with confidence.

Today's marketplace is increasingly challenging for our industry with tightening of regulations and new European requirements. Our customers also often have constantly changing priorities – unscheduled changes to work programmes, new priorities on site, emergency repair and maintenance and unforeseen revisions to material specifications.

At Sheffield Insulations we provide a fast, flexible, responsive and reliable 'one-stop shop' service that meets these ever changing customer demands. Our experienced sales personnel receive ongoing training in products and applications. Our knowledge and understanding of your industry means we can respond to your exact requirements and provide added value solutions.



### *Technical expertise*

Changes to the Building Regulations mean more diversity in product ranges and added complications. We can provide the sound, impartial, technical advice you need on use, choice and cost of product solutions to ensure that legal and safety standards are met in building and industry, and that projects are on budget.



## ABOUT THE BUILDING REGULATIONS

AT PUBLICATION DATE (APRIL 2005) THE LATEST INFORMATION RELATING TO THE BUILDING REGULATIONS IS AS FOLLOWS:

*For further details contact your local Sheffield Insulations branch.*

### Approved Document Part L

*(Part J – Scotland)*

#### **The Amendments**

Part L1 (2002) and Part L2 (2002) are due to be replaced in December 2005 by:

- **Part L1A – New Dwellings**
- **Part L1B – Existing Dwellings (alterations and extensions)**
  
- **Part L2A – New Buildings that are not Dwellings**
- **Part L2B – Existing Buildings that are not Dwellings**

The main drivers of change behind Part L (Part J Scotland) are:

- **The Kyoto world summit agreement 1997**
- **A desire to see a reduction in green house gases**
- **The UK's commitment to reduce CO<sup>2</sup> emissions by 60% by 2050 (real progress by 2020)**

The key differences lie in the methodologies to be used between new buildings and existing buildings.

## **New Buildings:**

In order to better measure how effectively the government is achieving its goal of raising overall energy performance by 25%, the traditional Elemental (Walls, Roofs and Floors) and Target U values methods are being eliminated in favour of a 'Whole Building' approach where compliance will be based on the energy and carbon performance of the whole building. This will be known as SAP 2005.

However, the ODPM (Office of the Deputy Prime Minister) has published a U value comparison table for New Buildings (see below).

There is a considerable range between Indicative and the Worst Case and what this means is that the SAP rating is likely to demand U values figures for the various elements around the Indicative figure but in any circumstance the figures will be no higher than the Worst Case scenario.

The reason for the degree of variance on a building by building basis is that a SAP rating can be influenced by the energy performance of other factors such as Boilers and Windows or Glazing.

	CURRENT	INDICATIVE	WORST CASE
<b>Walls</b>	0.35	0.27	0.35
<b>Floors</b>	0.25	0.22	0.25
<b>Roofs</b>	0.16 - 0.20	0.13	0.25

*What is beyond doubt, however, is that Insulation is the easiest way to achieve improved thermal performance and as such will be a key factor in achieving a SAP rating.*

## **Existing Buildings/Material Change of Use:**

Elemental U values will still apply on existing dwellings but the values will change as per the table shown. This effectively means that extensions to existing buildings will have to perform to a superior level than the rest of the building.

*Higher performance or thicker insulation are the most effective ways of achieving these Standards.*

	CURRENT	PROPOSED
<b>Walls</b>	0.35	0.27
<b>Floors</b>	0.25	0.22
<b>Ceilings</b>	0.16	0.13
<b>Roofs - Pitched</b>	0.20	0.16(Ext) 0.20(Alt)
<b>Roofs - Flat</b>	0.25	0.16(Ext) 0.25(Alt)

## **European Building Directive:**

The revisions to Part L form part of the UK's response to the European Building Directive (published 4th January 2003) which has the objective of 'promoting the improvement of the energy performance of buildings within the community'. The most significant aspect of this Directive is that Member states will have to ensure that when a building is constructed, sold or rented out that an energy performance certificate is made available. This legislation is scheduled to take effect on the 4th June 2006.

*As a nationwide distributor of Insulation, Sheffield Insulations branches can offer you impartial advice and solutions to achieve these regulations no matter where in the UK you are working.*

## Approved Document Part E (Part H – Scotland)

Part E took effect in July 2003 primarily as a response to the increasing number of complaints about noise, a higher density of housing per hectare (PPG) and the recognition of the potential risk from noise to health and well-being.

Approved Document E is split into four sections:

- **E1 – Protection against sound from other parts of the building and adjoining buildings**
- **E2 – Protection against sound within a dwelling/house etc**
- **E3 – Reverberation in the common internal parts of buildings containing flats or rooms for residential purposes**
- **E4 – Acoustic conditions in schools**

In respect of E1 and E2 the document gives examples of constructions which if built correctly should achieve the sound insulation values set out in Tables 1A and 1B below. Sheffield Insulations sales staff are trained and conversant with Part E and can help you select the right material to use when building these construction types.

A major constituent of Approved Document E1 and E2 is **Pre-completion testing**, a minimum of one in every 10 dwellings of the same house type are required to be tested and depending on the mix of different types of dwelling in a development, testing will be required on 10% - 30% of the development. For example if a development has only one type of house or flat within it, only 10% will require testing. If like most developments there is a mixture of different types of houses or flats the percentage of dwellings requiring testing is likely to be greater. No testing is required for construction work done in accordance with Approved Document E3.

Tables 1A and 1B below illustrate the airborne sound insulation and impact sound insulation values required in the various types of dwellings. Please note that in the case of airborne sound insulation,  $D_{nTw}$  is the measurement used. However as low-frequency sound is the most difficult frequency range to stop, a  $C_{tr}$  (correction factor) is used to take this into account.  $L_{nTw}$  is the measurement used to measure the impact sound insulation of floors (on site).

*With airborne sound, the higher the  $D_{nTw} + C_{tr}$  figure the better, and with impact sound, the lower the  $L_{nTw}$  figure the better.*

**TABLE 1A: Dwelling-houses and flats - performance standards for separating walls, separating floors, and stairs that have a separating function**

	Airborne sound insulation $D_{nTw} + C_{tr}$ dB (Minimum values)	Impact sound insulation $L_{nTw}$ dB (Maximum values)
<b>Purpose built dwelling-houses and flats</b>		
Walls	45	-
Floors and stairs	45	62
<b>Dwelling-houses and flats formed by material change of use</b>		
Walls	43	-
Floors and stairs	43	64

**TABLE 1B: Rooms for residential purposes - performance standards for separating walls, separating floors, and stairs that have a separating function**

	Airborne sound insulation $D_{nTw} + C_{tr}$ dB (Minimum values)	Impact sound insulation $L_{nTw}$ dB (Maximum values)
<b>Purpose built dwelling-houses and flats</b>		
Walls	43	-
Floors and stairs	45	62
<b>Rooms for residential purposes formed by material change of use</b>		
Walls	43	-
Floors and stairs	43	64

As an alternative to pre-completion testing there is the option to use **Robust Details** which was accepted as an alternative to pre-completion testing on the 1st July 2004. This new way of working is controlled by Robust Details Ltd, which is a non-profit making organisation comprising representatives from, amongst others, Building Control, warranty providers, acoustic advisors and the ODPM (Office of the Deputy Prime Minister).

Robust Details Ltd has already published specifications for Robust Details for walls and floors in the various construction types and at the time of writing these are largely generic specifications rather than those of specific manufacturer solutions. Robust Details Ltd does however assess new candidate Robust Details and form a link with Building Control to maximise quality control.

*All Sheffield Insulations branches have a copy of the Robust Details handbooks and can advise you which materials to use when building to any of the Robust Details listed.*