

2006 Building Regulations

April 2006 Building Regulations Insulation Values

To comply with the revised Building Regulations from April 2006 the following is offered as a guide. High density rigid polyurethane foam depths (nominal) are given where the foam is to be sprayed in place to achieve the U values required under the Building Regulations 2006.

Please note that lower density foams will require increased depths to achieve the U value below. Low grade (strictly not B.S. Class 1) relatively low density foams are being imported by some companies into the UK market and these foams are sold as comparable (usually with a 20% price advantage) but are not. The high density foams that Iso-Spray use are specified as $\geq 35 \text{ kg/m}^3$ and are B.S. Class 1 rated.

1) New Build or New Build Extension U values

New thermal elements (walls, floors and roofs) are to have U-values at least that as given below. U-values for new pitched roofs with insulation between rafters or at ceiling level are unaltered but all others are reduced. The new maximum U-values are:

Element

U-value
W/m²K

Foam Depth
mm

Walls

0.30

75

Floors

0.22

90

Flat roof or roof with
integral insulation

0.20

100

Pitched roof (insulation at
ceiling level)

0.16

130

Pitched roof (insulation at
between rafters)

0.20

100

Windows, roof windows and
roof lights

1.80

-

Doors with more than 50% of
the internal surface area glazed

2.20

-

Other doors

3.00

-

Areas of windows, roof
windows and doors should not be greater than 25% of floor area of the extension
plus area of any windows or doors no longer exist or no longer exposed as a
result of extension works.

2) Conversion or Change of Use U Values

Where more than 25% of the
surface area of an element is being renovated, the whole of the element will
need to be upgraded to achieve the following U-values.

Element being renovated

U-value W/m²K

Foam Depth
mm

Walls

0.35

65

Floors

0.25

100

Flat roof or roof with
integral insulation

0.25

100

Pitched roof (insulation at ceiling level)

0.16

140

Pitched roof (insulation at between rafters)

0.20

120

3) Existing Elements Being Retained

Where existing thermal elements are to be retained, and are below a specified 'threshold U-value', they will need to be upgraded to achieve the following U-values.

Element being retained or renovated

Threshold
U-value W/m²K

Improved
U-value

W/m²K

Foam Depth
mm

Cavity walls

0.70

0.55

40

Other all types

0.70

0.35

60

Floors

0.70

0.25

100

Pitched roof (insulation at

ceiling level)

0.35

0.16

140

Pitched roof (insulation at
between rafters)

0.35

0.20

120

Flat roof or roof with
integral insulation

0.35

0.25

100