

Timber Frame Batt & Timber Frame Roll

CI/Sfb

(21.9)

Km1

(K2)

Ref: 006

June 2004

Applications:

Timber Framed External and Party Walls, Roofs

High performance glass mineral wool products with excellent thermal, acoustic and fire properties, designed to meet Part L and Part E Building Regulations (Part J & H in Scotland).



Description

Unfaced, non-combustible glass mineral wool supplied in batt or roll form.

The products are self supporting between timber studs or rafters without the need for additional fixing. They are made in 570mm widths compatible with timber frames at 600mm centres and are of modular length to suit standard domestic storey height.

Durability

- Odourless, inert and fully compatible with all standard building materials and components.
- Will not accelerate corrosion of steel, copper or aluminium.
- Will not sustain vermin or promote the growth of mould, fungi or bacteria.
- Will not slump or consolidate in normal building applications.

Environmental

The basic constituent of Isowool is glass mineral wool, manufactured from silica sand, the Earth's most abundant naturally occurring mineral.

Glass mineral wool is one of the most environmentally friendly insulation materials. Inorganic and completely inert, over 70% of the raw material used in the production cycle are recycled.

This process does not include the use of CFC's, HCFC's or any other environmentally damaging gases.

Benefits

- Meets the requirements of Part E Building Regulations under the Robust Details for party walls.
- Enables Building Regulations Part L compliance for walls with a 90mm stud frame.
- Provides a simple and cost effective thermal solution for warm roof applications
- Easy to install
- Long product life - will not age
- Will tolerate structural movement and settlement

Standards



Isowool Timber Frame Batts and Rolls are manufactured under BSI Quality Management Standard BS EN ISO 9001:2000

Fire Performance

Made from inherently non-combustible materials, Isowool Timber Frame Batts and Rolls are completely fire safe, achieving a Euroclass A1 fire rating when classified in accordance with BS EN 13501-1.

Temperature Limitation

Designed for use at normal building temperatures but may be used at temperatures up to 230°C.



Thermal Performance

External Walls

External wall consisting of facing brick and a nominal 50mm clear cavity with a sheathing board fixed to timber studs at maximum 600mm centres. **Isowool Insulation** in stud cavity with a Gyproc WallBoard inner lining.



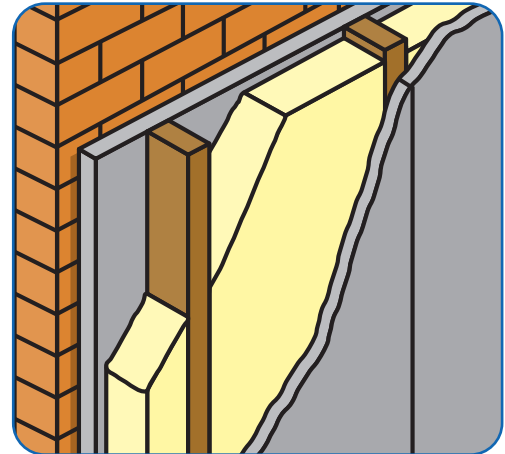
The following constructions meet Building Regulations Elemental U-values for England and Wales. (0.35) and Scotland (0.30) subject to timber fraction.

Isowool Frame Batt HP 032

Insulation thickness mm	Stud thickness mm	U-value W/m ² .K
90	90	0.35

Isowool Timber Frame Batt 043

Insulation thickness mm	Stud thickness mm	U-value W/m ² .K
140	140	0.30



New Build-Warm Roof

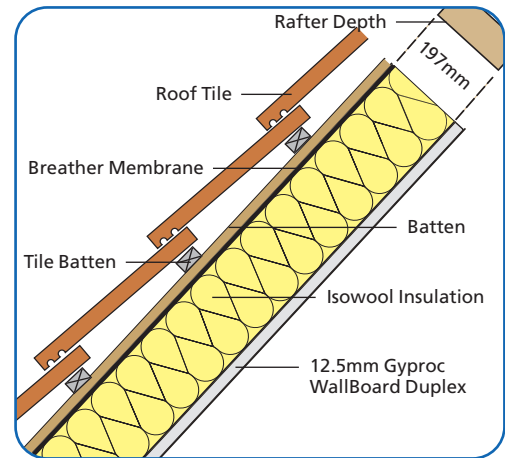
Isowool Frame Batt 035 / Isowool Frame Roll 035

Tiled or slated roof on tiling battens on breather membrane on 48mm thick softwood rafters. Internal lining of Gyproc WallBoard Duplex. **Isowool Frame Batt 035** or **Isowool Frame Roll 035** installed between the rafters, fully filling the rafter depth (2x100mm).



Solution to meet the required U-value of 0.20 W/m².K.

Rafter depth	Insulation thickness	Ceiling lining	Overall thickness Rafter + lining
197mm	200mm Isowool Frame Batt 035 or Frame Roll 035	Gyproc WallBoard Duplex	210mm



Loft Conversion



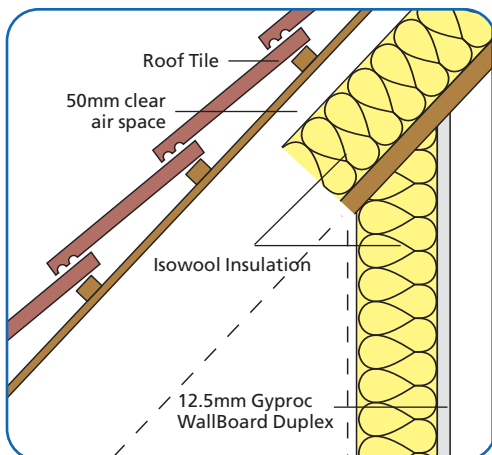
For 'Room-in-the-Roof' loft conversions - solutions to meet the required roof U-value of 0.30 W/m².K

Maintaining a 50mm airgap beneath roofing felt

Basic Construction - Tiled or slated roof on tiling battens on roofing felt on 48mm thick softwood rafters. Internal lining of Gyproc Thermal Laminate.

Isowool Frame Batt HP 032 or Isowool Frame Roll 035

installed between the rafters, maintaining a 50mm ventilated airspace beneath the roofing felt.



Rafter Depth	Insulation Thickness	Ceiling Lining	Overall Thickness Rafter & Lining
100mm	50mm Isowool Frame Batt HP 032	50mm Gyproc Thermaline Super	150mm
150mm	100mm Isowool Frame Batt 035 or Frame Roll 035	35mm Gyproc Thermaline Plus	185mm

For 'Room-in-the-Roof' loft conversions - solutions to meet the required wall U-value of 0.35 W/m².K

Vertical Stud Depth	Insulation Thickness	Internal Wall Finish	Wall U-value W/m ² .k
100mm	100mm Isowool Frame Batt 035 or Frame Roll 035	12.5mm Gyproc WallBoard Duplex	0.35

Max 9.3% Timber fraction.

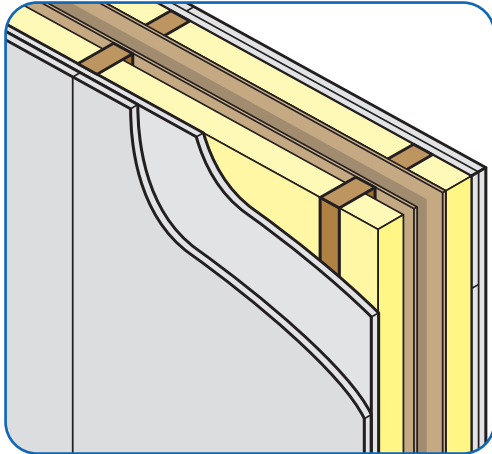
Acoustic Performance

Party Walls



Part E Building Regulations July 2003 call for a minimum 45dB airborne sound insulation (plus C_{tr} correction factor for low frequency noise) in party walls. The following constructions incorporating **Frame Batt HP 032** will comply with this requirement as a Robust Detail.

Twin Timber Frames with cavity sheathing board



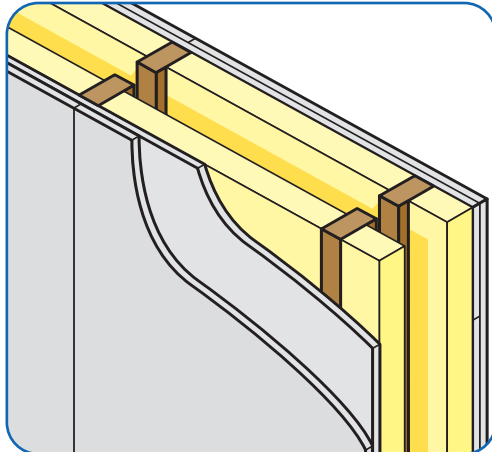
2 layers of 12.5mm plasterboard nominally 22kg/m² (typically 19mm Gyproc Plank plus 12.5mm Gyproc WallBoard) with joints staggered each side of timber frame with 90mm **Frame Batt HP 032** each side. Sheathing board fixed to internal (cavity) side of each stud frame.

Sheathed construction

Method of compliance: Robust Detail

Insulation thickness mm	Robust Detail	Test Performance Range dB	Mean Performance Range dB
90	E-WT-2	48 - 64	54

Twin Timber Frames without cavity sheathing board



2 layers of 12.5mm plasterboard nominally 22kg/m² (typically 19mm Gyproc Plank plus 12.5mm Gyproc WallBoard) with joints staggered each side of timber frame with 90mm **Frame Batt HP 032** each side.

Unsheathed construction

Method of compliance: Robust Detail

Insulation thickness mm	Robust Detail	Test Performance Range dB	Mean Performance Range dB
90	E-WT-1	47 - 65	55

www.isowool.com

Further information on other Isowool products to meet the Building Regulations can be found on our website. By registering on the site, you will receive regular updates on products, Building Regulations, and new literature.

Packaging and Physical Dimensions

Roll Products

All Roll product widths are split 2x570mm.



Frame Roll 035

R-value	Thickness mm	Length m	Pack area m ²
2.57	90	5.30	6.04
2.86	100	4.80	5.47

Timber Frame Roll 043

R-value	Thickness mm	Length m	Pack area m ²
2.09	90	9.40	10.72
3.26	140	7.05	8.04

Thermal Performance Indicator

Ultimate performance Lambda 0.032



Standard performance Lambda 0.043

Batt Products

All Batt products are 570mm wide and 1175mm in length.



Frame Batt HP 032

R-value	Thickness mm	Pack area m ²	Batts per pack
1.56	50	6.03	9
2.81	90	3.35	5

Frame Batt 033

R-value	Thickness mm	Pack area m ²	Batts per pack
2.88	95	4.02	6

Frame Batt 035

R-value	Thickness mm	Pack area m ²	Batts per pack
2.86	100	5.36	8
4.29	150	4.02	6

Timber Frame Batt 043

R-value	Thickness mm	Pack area m ²	Batts per pack
2.09	90	8.04	12
2.33	100	8.04	12
3.26	140	5.36	8

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