



METAC

Thermal and acoustic insulation for pitched roof rafter applications





Metac

Metac is a high performance glass mineral wool insulation. It provides a 2-in-1 thermal and acoustic solution for quieter loft living, reducing externally generated noise by 49dB (Rw)¹. It is also one of the most cost effective and easy to install systems on the market.



This innovative insulation has been designed as a 'slab on a roll'. This makes it a more robust solution than other alternative rolls for installing within pitched roof rafters, as it is able to support itself under its own weight, without any additional fixings.

All in all, Metac offers a high thermal performance with added acoustic benefits at no additional cost that will enhance the comfort and wellbeing of the occupants and create great places to live.



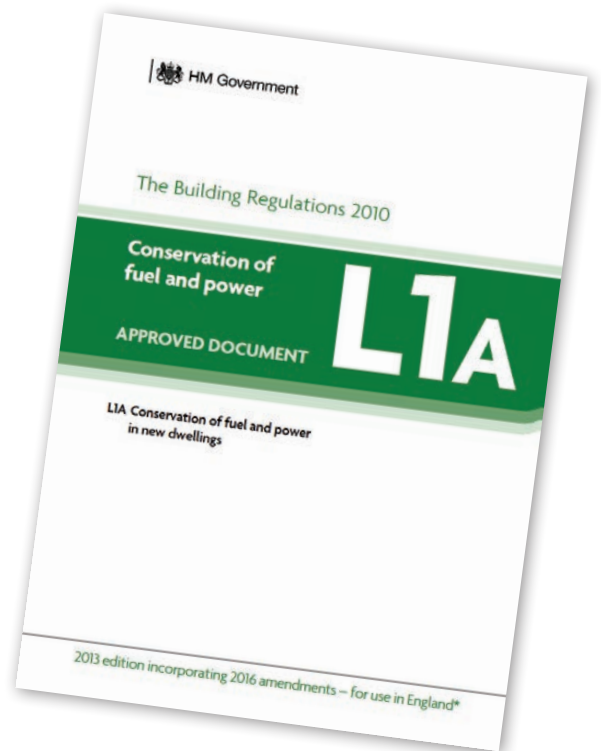
¹University of Salford Acoustic testing to BS EN ISO 10140-2:2010 - March 2018.

Building Requirements



The table below details the thermal performance stipulated by the UK building regulations for pitched roofs within new build residential housing.

Country	Minimum standards for thermal U-values W/m ² K
England	0.20
Scotland	0.15
Wales	0.15



Metac has also been listed under the LABC Registered Details Scheme. This scheme is a one-off fast track certification process so that products within the detailed application can be accepted by LABC building control surveyors in more than 300 local authorities across the country.

As the only scheme of its kind supported by all local authorities, it creates a ready-made library, which simplifies the submission route.

Metac LABC Registered Detail for pitched roof rafter applications - Certificate No. EW1027D.



Download the details at:
[isover.co.uk](https://www.labc.co.uk/business/registered-details) or visit <https://www.labc.co.uk/business/registered-details>

Product Details



Metac combines thermal and acoustic performance for quieter and warmer loft living. As a 'slab on a roll', it's easy and fast to fit on site and available in a range of thicknesses to suit common rafter depths.

Features and Benefits



A high performance thermal insulation with a thermal conductivity of 0.034 W/mK that helps achieve a range of U-values to meet or exceed the latest building regulations.



Metac has been tested and shown to achieve a sound reduction of 49 dB (R_w) in pitched roof applications for externally generated airborne sound.¹



Metac is self-supporting and quick and easy to install as it friction-fits between rafters without the need for any additional fixings. It is available in 50-200mm thicknesses to suit a variety of rafter depths and building details.



Metac is very flexible and easy to cut and fit on site, with little or no waste, as any off-cuts can be reused. The speed of install and minimal waste make it a cost effective option.



Metac is manufactured from up to 80% recycled glass. This makes it one of the most sustainable insulation products on the market today.



Metac is classed as non-combustible and has an A1 Euroclass fire rating, the best attainable.



Product Specification

Product code	Thickness (mm)	Width (mm)	Length (mm)	Pack area (m ²)	Packs per pallet	Pallet area (m ²)	λ _D Declared thermal conductivity (W/mK)	R _D Declared thermal resistance (m ² K/W)
5200819227	50	1200	9300	11.16	18	200.88	0.034	1.45
5200819232	125	1200	4800	5.76	18	103.68	0.034	3.65
5200826090	150	1200	4100	4.92	18	88.56	0.034	4.40
5200819233	175	1200	3500	4.20	18	75.60	0.034	5.10
5200819234	200	1200	3200	3.84	18	69.12	0.034	5.85

¹University of Salford Acoustic testing to BS EN ISO 10140-2:2010 - March 2018.

Acoustic Benefits



We are all sensitive to noise, whether at work or at home, alone or socially, but in a government survey 48% of British people feel their home life is spoilt to some extent by noise.¹ This well-known urban phenomenon causes numerous problems such as sleep disorders, stress or loss of concentration.

In a building, noise can often come from outside (road, rail or air traffic, or voices in the street). As acoustic comfort is such an essential element for quality of life, Isover has been conducting extensive research and development for many years to help improve acoustic performance within the home.

Most recently, in conjunction with Salford University, we have tested different types of insulation within pitched roof rafter applications. The results showed that Metac achieved an outstanding **49 dB (R_w)** reduction in externally-generated airborne sound.²



¹ GOV Noise Attitude Survey - 2012. ² University of Salford Acoustic testing to BS EN ISO 10140-2:2010 - March 2018.

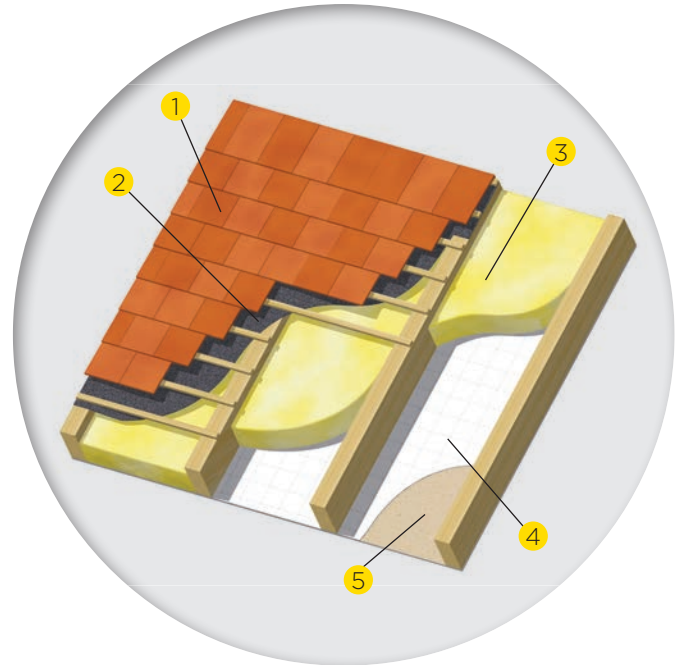


Pitched Roof with Thermal Laminate

Insulation between rafters + Thermal Laminate

Detail

- 1 Tiled or slated roof on tiling battens
- 2 Breathable membrane
- 3 Metac insulation installed between rafters*
- 4 Vapour control layer
- 5 Thermal Laminate or PIR with 12.5mm plasterboard



*Ensuring a 25mm ventilation void is maintained between the insulation and membrane above.

Insulation between rafters (50mm wide rafters at 600mm centres)	Insulation below rafters	U-value W/m ² K
125mm Metac	53mm Gyproc Thermaline PIR or 40mm PIR (0.022 W/mK) with 12.5mm plasterboard	0.19
125mm Metac	63mm Gyproc Thermaline PIR or 50mm PIR (0.022 W/mK) with 12.5mm plasterboard	0.17
150mm Metac	53mm Gyproc Thermaline PIR or 40mm PIR (0.022 W/mK) with 12.5mm plasterboard	0.17
150mm Metac	63mm Gyproc Thermaline PIR or 50mm PIR (0.022 W/mK) with 12.5mm plasterboard	0.16
175mm Metac	53mm Gyproc Thermaline PIR or 40mm PIR (0.022 W/mK) with 12.5mm plasterboard	0.15
175mm Metac	63mm Gyproc Thermaline PIR or 50mm PIR (0.022 W/mK) with 12.5mm plasterboard	0.14
200mm Metac	63mm Gyproc Thermaline PIR or 50mm PIR (0.022 W/mK) with 12.5mm plasterboard	0.13
200mm Metac	78mm Gyproc Thermaline PIR or 65mm PIR (0.022 W/mK) with 12.5mm plasterboard	0.12
200mm Metac	93mm Gyproc Thermaline PIR or 80mm PIR (0.022 W/mK) with 12.5mm plasterboard	0.11

Insulation between rafters (50mm wide rafters at 400mm centres)	Insulation below rafters	U-value W/m ² K
125mm Metac	53mm Gyproc Thermaline PIR or 40mm PIR (0.022 W/mK) with 12.5mm plasterboard	0.20
125mm Metac	63mm Gyproc Thermaline PIR or 50mm PIR (0.022 W/mK) with 12.5mm plasterboard	0.18
150mm Metac	53mm Gyproc Thermaline PIR or 40mm PIR (0.022 W/mK) with 12.5mm plasterboard	0.18
150mm Metac	63mm Gyproc Thermaline PIR or 50mm PIR (0.022 W/mK) with 12.5mm plasterboard	0.16
175mm Metac	53mm Gyproc Thermaline PIR or 40mm PIR (0.022 W/mK) with 12.5mm plasterboard	0.16
175mm Metac	63mm Gyproc Thermaline PIR or 50mm PIR (0.022 W/mK) with 12.5mm plasterboard	0.15
200mm Metac	63mm Gyproc Thermaline PIR or 50mm PIR (0.022 W/mK) with 12.5mm plasterboard	0.14
200mm Metac	78mm Gyproc Thermaline PIR or 65mm PIR (0.022 W/mK) with 12.5mm plasterboard	0.12

The above tables show a selection of systems, for additional options and bespoke U-values, please contact your local Area Sales Manager (see website for contact details). Alternatively, please contact our Technical Advice Centre on 0115 945 1143.

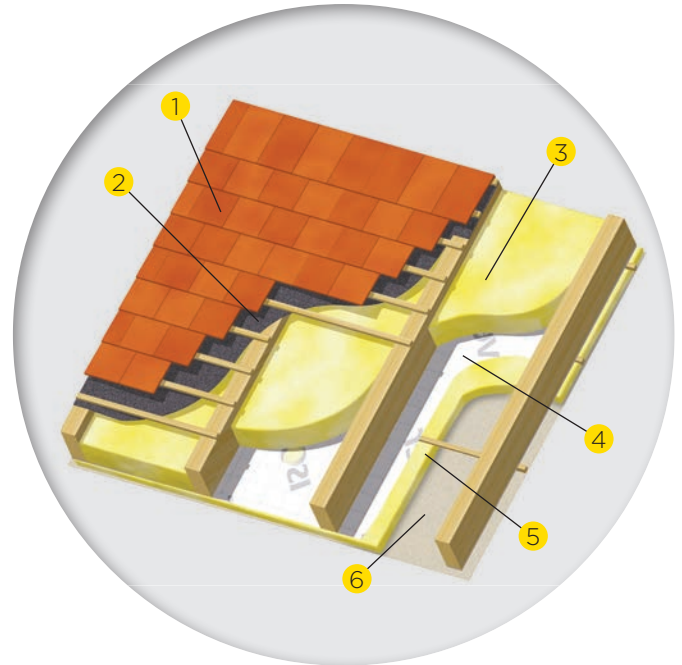


Pitched Roof with Internal Counter Batten

Insulation between rafters + internal counter battens

Detail

- 1 Tiled or slated roof on tiling battens
- 2 Breathable membrane
- 3 Metac insulation installed between rafters*
- 4 Vapour control layer
- 5 Metac insulation between counter battens
- 6 12.5mm plasterboard



*Ensuring a 25mm ventilation void is maintained between the insulation and membrane above.

Insulation between rafters (50mm wide rafters at 600mm centres)	Insulation between counter battens	Board lining	U-value W/m ² K
150mm Metac	50mm Metac	12.5mm plasterboard	0.19
175mm Metac	50mm Metac	12.5mm plasterboard	0.17
200mm Metac	50mm Metac	12.5mm plasterboard	0.16

Insulation between rafters (50mm wide rafters at 400mm centres)	Insulation between counter battens	Board lining	U-value W/m ² K
150mm Metac	50mm Metac	12.5mm plasterboard	0.19
175mm Metac	50mm Metac	12.5mm plasterboard	0.18
200mm Metac	50mm Metac	12.5mm plasterboard	0.16

The above tables show a selection of systems, for additional options and bespoke U-values, please contact your local Area Sales Manager (see website for contact details). Alternatively, please contact our Technical Advice Centre on 0115 945 1143.

Installation Guide



Metac is self-supporting with excellent recovery and strength. It's easier to cut than alternative insulation materials and its ability to friction-fit between the rafters also makes it faster to install.

Its robust mechanical properties ensure no slumping during installation, or in use, and the friction-fit also means there are no additional fixings required and equally, there are no unintended air gaps, which could compromise thermal performance.

1



Measure and record both the vertical length of the rafters and the horizontal width of the gap between rafters. Choose the appropriate Metac thickness for the rafter depth and to maintain the ventilation voids required for the roofing membrane.

Installation Guide

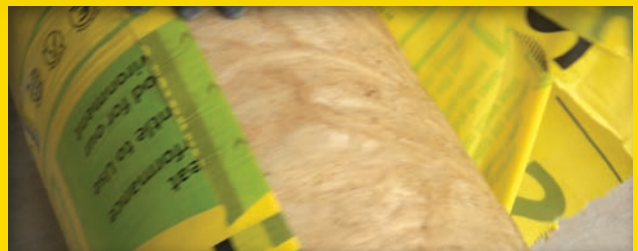


2



Measure and cut the roll with an insulation saw or insulation knife to fit the horizontal width of the gap between the rafters whilst still in its packaging – adding an extra 10mm width to the Metac to allow for a snug fit.

3



Slit the packaging on the cut section of the roll to allow the Metac to unroll and allow full thickness recovery. Measure and cut the roll to the required length with a straight edge and a sharp insulation knife.

Installation Guide



4



Push and friction-fit the Metac between the rafters working from the bottom up, keeping the lower face of the Metac flush with the rafters. Ensure ventilation voids are maintained where required.

5

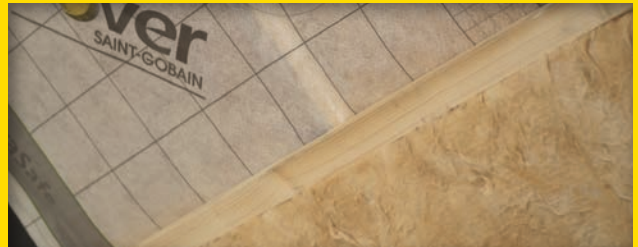


Once the rafters are filled with Metac, apply a vapour control layer (VCL) to the underside of the rafters, following the manufacturer's instructions and recommendations.

Installation Guide



6



Finally, a thermal laminate, insulation with plasterboard or another layer of Metac can be installed between 50mm counter battens fixed at 600mm centres.

The addition of counter battens protects the VCL from penetrations and creates a useful service void for running cables behind the plasterboard.



For more information, see our installation video at isover.co.uk/Metac2in1



Isover

Whitehouse Industrial Estate,
Runcorn, Cheshire WA7 3DP

Customer Service

Tel: 0800 032 2555
isovercustomerservice@saint-gobain.com

Technical Advice Centre

Tel: 0115 945 1143
isover.enquiries@saint-gobain.com

isover.co.uk

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Saint-Gobain Isover UK Limited registered in England. Company registered number 10442670.
Registered Office Address: Saint-Gobain House, Binley Business Park, Coventry, CV3 2TT