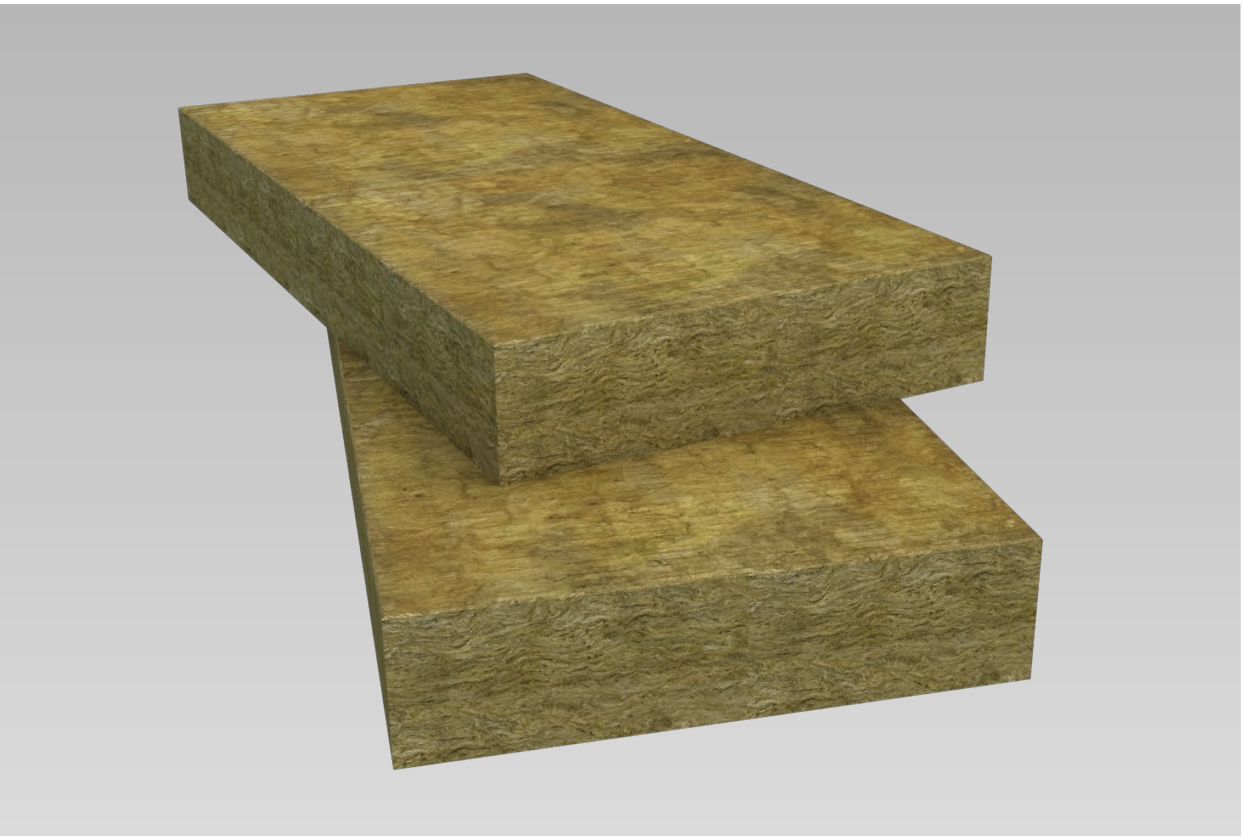


Timber Frame Slab

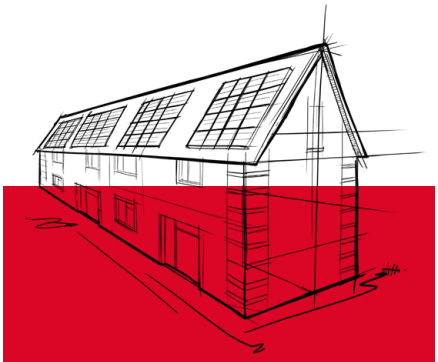
Non-combustible thermal insulation designed for use within timber frame constructions.

ROCKWOOL Timber Frame Slab is a semi-rigid insulation designed specifically for use between the studwork of external timber frame walls.

Timber Frame Slab is non-combustible, and achieves the highest Euroclass A1 reaction to fire classification as defined in EN 13501-1.

ROCKWOOL stone wool insulation is sound absorbing and can be used to reduce the noise transmission into a building and between the indoor spaces, making it a suitable solution when used in a timber frame application.

- Thermal performance – 0.034 W/mK.
- Non-combustible – Euroclass A1 classification as defined in EN 13501-1.
- 570mm slab width for installation into 600mm frames.
- Stone wool is endlessly recyclable, meaning that it can be recycled again and again without any degradation.



ROCKWOOL stone wool insulation, like the basalt rock it is made from, is non-combustible. It is capable of withstanding temperatures exceeding 1,000°C.

Pencoed, Bridgend CF35 6NY
Tel: (+44) 1656 862 621 • technical.solutions@rockwool.com

Timber Frame Slab

APPLICATIONS

ROCKWOOL Timber Frame Slab has been designed specifically for installation into the standard size 600mm (on centre) studs, of external timber frame walls.

PERFORMANCE

Thermal performance

Timber Frame Slab achieves a thermal conductivity lambda (λ) value of 0.034 W/mK in accordance with BS EN 13162:2012 + A1:2015.

Fire performance

Timber Frame Slab is non-combustible achieving a reaction to fire classification of A1, as defined in EN13501-1.

Acoustic performance

Timber Frame Slab can reduce outside sources of noise when used in an external wall.

The non-directional fibre orientation and density of stone wool means that sound waves are trapped, and vibrations dampened which can reduce outside sources of noise when used in an external wall.

Timber Frame Slab

TYPICAL U-VALUES

Typical wall constructions and u-value are listed in the tables below:

Timber frame external wall constructions

1. Insulation between the studs, without service void:

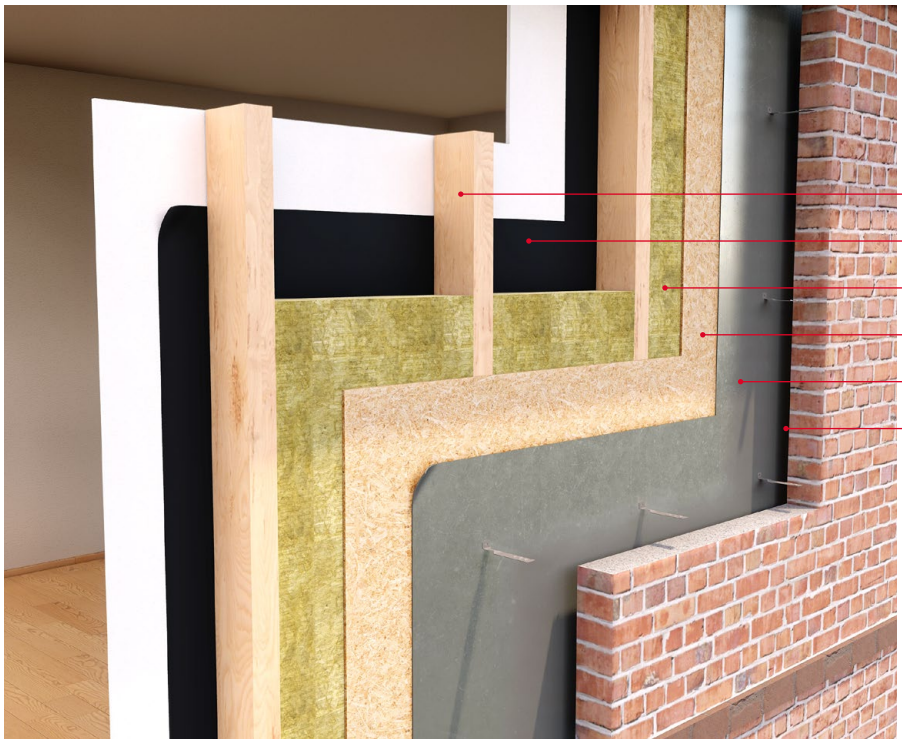


Figure 1

U-value (W/m^2K)	Timber Frame Slab (mm)	Stud depth	Vapour control layer	Breather membrane		
			Standard	Standard	Tyvek Reflex	Protect TF200 Thermo
0.28	140	140	•	•	-	-
0.25	140	140	•	-	•	-
0.23	140	140	•	-	-	•

Timber Frame Slab

2. Insulation between the studs, with service void:

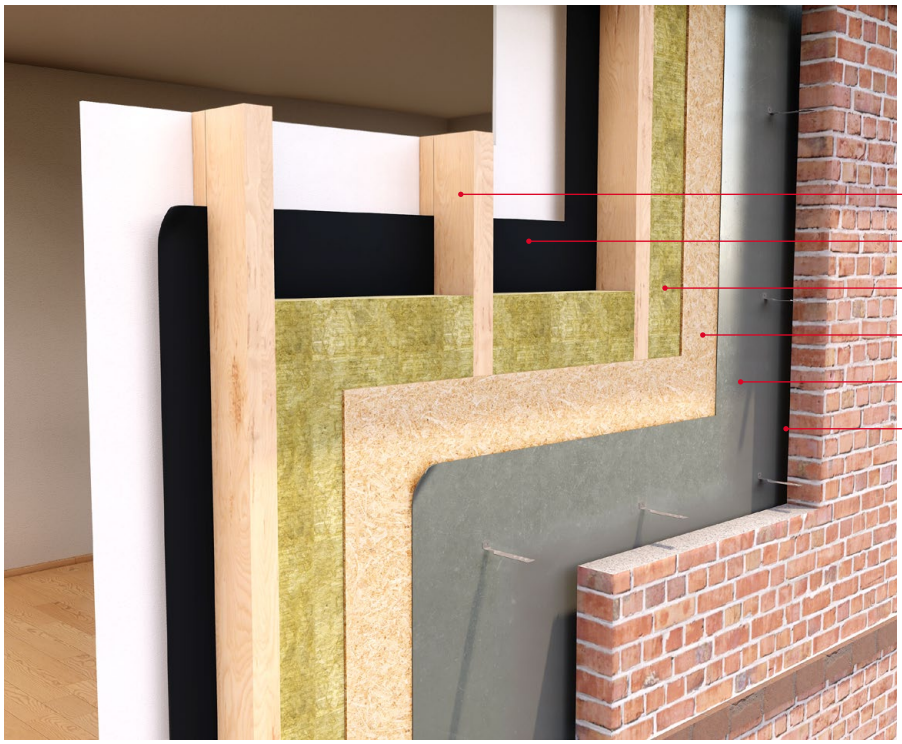


Figure 2

			Vapour control layer			Breather membrane		
U-value (W/m^2K)	Timber Frame Slab (mm)	Stud depth	Standard	Tyvek AirGuard	Protect VC Foil Ultra	Standard	Tyvek Reflex	Protect TF200 Thermo
0.36	90	89	•	-	-	•	-	-
0.28	90	89	-	•	-	-	•	-
0.26	90	89	-	-	•	-	-	•
0.26	140	140	•	-	-	•	-	-
0.21	140	140	-	•	-	-	•	-
0.20	140	140	-	-	•	-	-	•

Timber Frame Slab

3. Insulation between the studs with sheathing insulation:

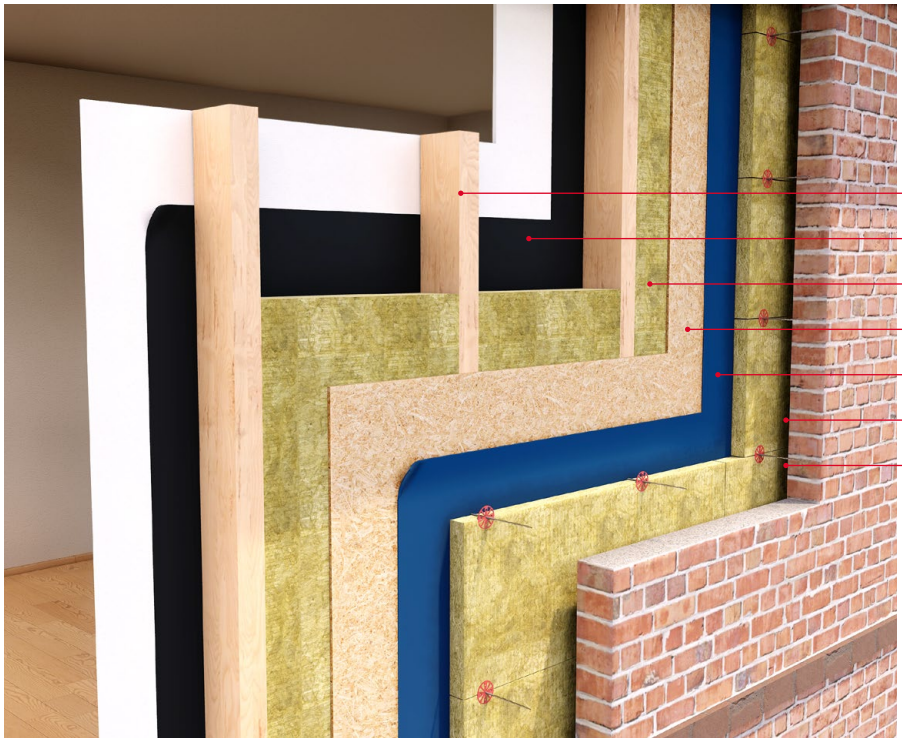


Figure 3

U-value (W/m^2K)	Timber Frame Slab (mm)	Stud depth	RainScreen Duo Slab (mm)	Vapour control layer	Breather membrane
				Standard	Standard
0.24	90	89	50	•	•
0.19	140	140	50	•	•

Timber Frame Slab

4. Insulation between the studs and with sheathing insulation and service void:

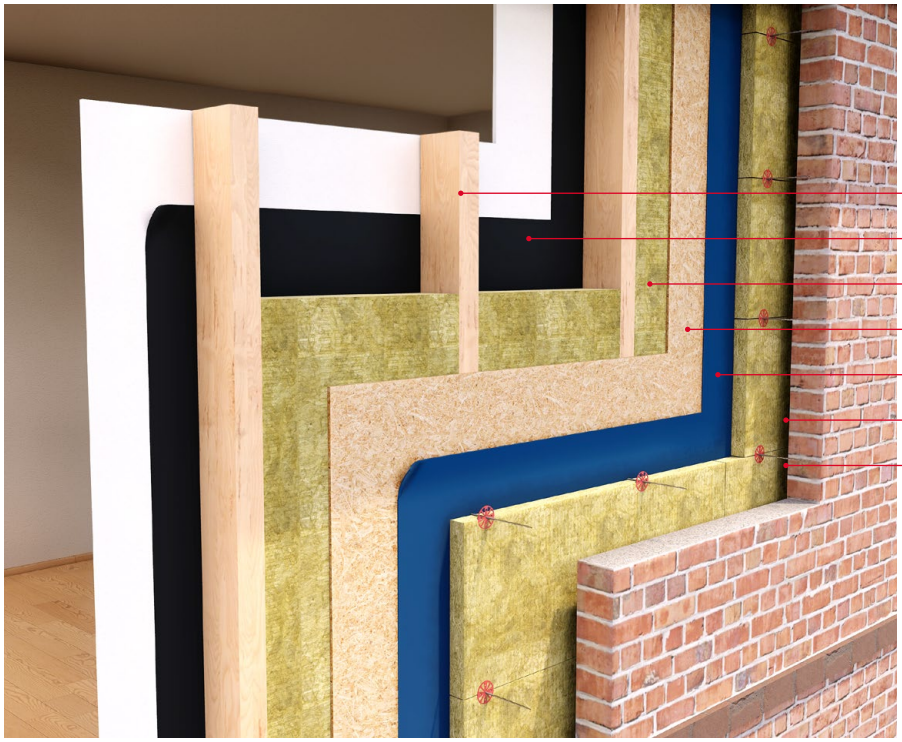


Figure 4

U-value (W/m^2K)	Timber Frame Slab (mm)	Stud depth	RainScreen Duo Slab (mm)	Vapour control layer			Breather membrane
				Standard	Tyvek Airguard	Protect VC Foil Ultra	Standard
0.23	90	89	50	•	-	-	•
0.21	90	89	50	-	•	-	•
0.21	90	89	50	-	-	•	•
0.19	140	140	50	•	-	-	•
0.17	140	140	50	-	•	-	•
0.17	140	140	50	-	-	•	•

Thermal bridging is assumed at 15%, with the thermal conductivity of the studs being 0.12 W/mK.

Timber Frame Slab

Vapour control and breather membranes – managing moisture

Vapour control membranes

A vapour control layer is essential on the 'warm' side of the insulation and frame, to reduce the risk of condensation forming inside the building. Thermal benefits can be achieved by using high performance vapour control membranes when they have a low emissivity reflective surface, and 20mm or more of non-ventilated air space. The benefit to the U-value can be seen in the performance tables.

The low emissivity R-values used in the calculations for the service zone are based on manufacturers' claims:

- Standard VCL = 0.180 m^2K/W
- Tyvek AirGuard = 0.680 m^2K/W
- Protect VC Foil = 0.780m^2K/W

Breather membranes

A vapour permeable membrane on the outside of the sheathing board is also necessary, this protects the timber frame from water penetration whilst allowing water vapour to escape. Again, enhanced thermal benefits are offered by reflective low emissivity membranes, where there is a clear air space of 20mm or more. The effect on the overall wall U-value can be seen in the tables.

The low emissivity R-values of the external cavity used in the calculations above are based on manufacturers' claims:

- Standard breather membrane = 0.180m^2K/W
- Tyvek Reflex = 0.540m^2K/W
- Protect TF200 Thermo = 0.770m^2K/W

For further U-Value calculations, and to download BIM models please visit:
rockwool.com/uk/resources-and-tools/tools/u-value-calculator/

Timber Frame Slab

PRODUCT INFORMATION

Length (mm)	Width (mm)	Thickness (mm)
1200	570	Available in a range of sizes between 50mm and 200mm

*Thickness options may be subject to a minimum production volume. Speak to the specification team for guidance.

ADDITIONAL INFORMATION

Durability

Tests of our stone wool recovered from old buildings have shown that it retains its performance characteristics – thermal, mechanical, fire resistance – for at least 50 years, and probably longer. A test of a 65-year-old stone wool sample found in 2023 during a renovation of Copenhagen airport showed that these characteristics had not diminished after 65 years.*

**Testing done at Danish Technical Institute (DTI) in 2023, "Testing ROCKWOOL insulation from CPH airport hangar 4"*

Water resistance and moisture

ROCKWOOL stone wool insulation is water repellent and non-hygroscopic, meaning it will not absorb water from the surrounding environment. It retains its thermal performance even in humid conditions, helping to support the durability of the building fabric.

Condensation

ROCKWOOL stone wool insulation is vapour permeable, reducing the risk of condensation, which can lead to rot, mould, and humidity damage.

STANDARDS AND APPROVALS

Certificate
Timber Frame Slab satisfies the requirements of BS EN 13162 "Thermal insulation products for buildings. Factory made mineral wool (MW) products".
Manufactured under ISO 14001 Environmental Management Systems, and ISO 9001 Quality Management Systems.

CE

INSTALLATION

Timber Frame Slabs are sized to friction fit into 600mm on-centre timber studs without the need to cut or create waste. Any cutting that is required can be carried out, to fit awkward spacing, using a serrated knife or insulation saw.

The product must be installed in accordance with the current ROCKWOOL guidelines. For further information please visit **rockwool.com/uk** or contact our Technical Solutions Team on 01656 868490.

BUILDING SAFETY AND PRODUCT USE

LEGAL NOTICES

General safety requirements – Building Safety Act 2022

ROCKWOOL Limited is committed to supporting specifiers, resellers and users of ROCKWOOL products for the full life cycle of the product to comply with the obligations and responsibilities set out in the Building Safety Act 2022. With regard to the general safety requirements of the Act, ROCKWOOL Limited cannot control or foresee every situation where its products might be used. We therefore strongly advise that specifiers, resellers and users contact us where use of ROCKWOOL products is contemplated in applications different from those explicitly described in the latest, relevant ROCKWOOL product datasheets; especially in applications that can be reasonably foreseen as critical to safety.

ROCKWOOL Limited reserves the right to amend the specification of its products without notice. Changes to the ROCKWOOL manufacturing process, or to pertinent regulations, may be reflected in changes to tested and certified product performance. Whilst ROCKWOOL Limited endeavours to keep its publications up to date, readers will appreciate that between publications there may be pertinent changes in the law or other developments affecting the accuracy of the information contained in our publications.

ROCKWOOL Limited does not accept responsibility for the consequences of using (including testing or certifying) its products in applications different from those explicitly described in the relevant ROCKWOOL product datasheets. Expert advice should be sought, and ROCKWOOL Limited should be contacted, where such different use is contemplated, or where the extent of any use described by ROCKWOOL Limited is in doubt.

The ROCKWOOL Trademark

ROCKWOOL® - our trademark

The ROCKWOOL trademark was initially registered in Denmark as a logo mark back in 1936. In 1937, it was accompanied with a word mark registration; a registration which is now extended to more than 60 countries around the world.

The ROCKWOOL trademark is one of the most important assets of the ROCKWOOL Group, and is therefore well-protected and defended by ROCKWOOL throughout the world.

If you require permission to use the ROCKWOOL logo for your business, advertising or promotion, you must apply for a Trade Mark Usage Agreement.

To apply, write to:
marketcom@rockwool.com

Trademarks

Registered trademarks of the ROCKWOOL Group include but are not limited to:

ROCKWOOL®, RockClose®, RainScreen Duo Slab®, HardRock®, RockFloor® Flexi®, RockFall®, FirePro®, DuctRock®, BeamClad®, NyRock®

Health and safety

A Material Safety Data Sheet is available and can be downloaded from rockwool.com/uk to assist in the preparation of risk assessments, as required by the Control of Substances Hazardous to Health Regulations (COSHH).

Photography and illustrations

The product illustrations are the property of ROCKWOOL Limited and have been created for indicative purposes only.

Unless indicated below, the photography and illustrations used in this guide are the property of ROCKWOOL Limited. We reserve all rights to the usage of these images.

If you require permission to use ROCKWOOL images, you must apply for a Usage Agreement.

To apply, write to:
marketcom@rockwool.com

Timber Frame Slab

Company:	ROCKWOOL Limited
Version:	Version 1.04 October 2025 *(to check this is the latest version, please refer to rockwool.com/uk)*
Revised on:	24.10.2025
Product Name:	Timber Frame Slab
Replaces Version:	Version 1.03 August 2025
Changes Made:	N/A
Additional Information:	N/A

Please ensure you are using the latest version of this document by verifying it on our official website. Do not rely on printed or previously downloaded copies, as these may be out of date.

Please contact the ROCKWOOL Technical Support Team if you would like to access archived versions of this document.

ROCKWOOL stone wool – safe to install and live alongside

There are no hazardous classifications associated with stone wool insulation manufactured by ROCKWOOL UK according to EU REACH and UK REACH regulations on health and the environment.

ROCKWOOL safe use instruction sheets and material safety data sheets (where applicable) can be downloaded here.

Sustainability

ROCKWOOL products are used to help enrich modern living, supporting more resilient and comfortable buildings.

We transform abundant, natural volcanic rock into stone wool insulation products that help our customers tackle energy consumption, noise pollution, fire resilience, and climate change challenges such as water scarcity and flooding.

Since our stone wool is endlessly recyclable with no loss in its performance properties, we can take back clean, uncontaminated new off-cuts and unused ROCKWOOL stone wool insulation from construction sites in the UK. Our service, Rockcycle®, takes back our stone wool and recycles it back into production where it is used to make new ROCKWOOL products.

Our annual sustainability reports, which set out progress against our sustainability goals, and further details of the positive impacts of using our products can be found on our website.

Environment

ROCKWOOL takes a fact-based, auditable approach to documenting our progress in maximising our products' positive impact and minimising the effect our operations have on the environment, backed by third-party references and methodologies. Further details can be found online in our annual sustainability report.

Our high-tech production process uses filters, pre-heaters, after-burners and other cleaning and collection systems that help to reduce the effects of our manufacturing operations on the environment.

ROCKWOOL stone wool insulation does not contain (and has never contained) gases that have ozone depletion potential (ODP) or global warming potential (GWP).

Pencoed, Bridgend CF35 6NY
Tel: (+44) 1656 862 621 • technical.solutions@rockwool.com