

FLEXI

Tools required

- Insulation saw
- Tape measure

Fixing and application

Step one - Pre-install Preparation

- Ensure you have identified the correct product for your application, this will ensure it has the correct testing and certification for the intended use. Navigate the ROCKWOOL website "insulation applications" to guide you by building element and application to find the recommended products. Review the relevant building regulations in the "technical resources" section, and use the calculators in the "tools" section, along with the product datasheets on the website to determine the appropriate thickness / dimensions of insulation that is required.
- If installing into a wall or floor frame, check whether the structure is 400mm or 600mm wide, and ensure you select the ROCKWOOL product with the correct width to match.

Step two - Installation Preparation

- Assemble tools such as an insulation saw, tape measure and PPE (personal protective equipment) such as gloves, mask if working in an unventilated area, and eye protection when working overhead. Cover all exposed skin. Refer to the EURIMA health and safety guidelines for further guidance when working with mineral wool.
- Carry out a pre-work safety check, identifying any potential hazards such as ease of access, work heights, trip hazards, and electrical safety. Check the construction ensuring it is structurally sound and free from defects such as corrosion, splitting, cracking and look for signs of leaks and moisture which can cause rot and mould.
- Clean and prepare the area for installation. Clear space to hold the insulation, if installing into floors below, or in a loft, use a kneel board and protective knee pads. When installing overhead wear protective eyewear. If installing at height, it is recommended this is done from a suitable structure such as scaffolding, rather than a step ladder, so that both hands can be used to safely fit the insulation. Ventilate the area if possible, and ensure it is well lit.

Health & safety

The mechanical effect of fibres in contact with skin may cause temporary itching.



*Cover exposed skin
When working in unventilated area wear disposable face mask.*



Clean area using vacuum equipment.



Waste should be disposed of according to local regulations.



Rinse in cold water before washing.



Ventilate working area if possible.



Wear goggles when working overhead.

Step three – Measuring and cutting

- Using a tape measure, measure the internal aperture of the frame, rafter or joist you are fitting the insulation into. Note that frame centre measurements (i.e. 400mm or 600mm) include the thickness of the timbers making up the structure, and that they may not always be consistent, so it is best to measure the internal aperture accurately to ensure the best possible fit, particularly when installing into older structures.
- Use an insulation saw, or knife with a serrated blade, for cutting the insulation to size. Do not over cut the insulation. Allow an extra 10mm on both dimensions (width and length) of the insulation, over and above the aperture dimensions.

Step four – Installation

- The density and dimensional stability of ROCKWOOL stone wool allows a tight friction fit. It will not require pinning or fixings unless specifically stated otherwise. To install, simply push the insulation into one side of the structure and let the insulation go so it tightly fits into the other side of the structure and holds in place.

Ensure there are no visible gaps, as this will negatively affect the installed performance.

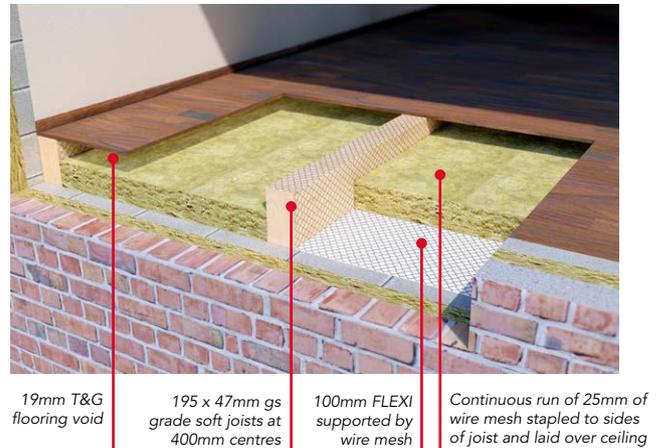
Fire protection:

Upgrading existing timber floor to achieve one hour fire resistance

Remove existing floor boards and install a continuous run of 25mm \varnothing chicken wire mesh across the whole floor. Form the mesh so that it follows the profile of the joists and the top face of the ceiling lining. 100mm ROCKWOOL FLEXI® is to fit tightly between the joists and supported by the mesh. Lay new floor of either 19mm flooring grade T&G chipboard or square edged boards with a layer of 3mm hardboard above or below the boards.

Figure 1

Fire protection: Upgrading existing timber floor to achieve one hour fire resistance



Acoustic applications – walls

Robust details - Separating timber framed walls

Robust details reference – E-WT-1

The following are required:

- **Wall width:** a minimum of 240mm between inner faces of wall linings and a 50mm gap between the two frames.
- **Wall lining:** 2 or more layers of gypsum-based board (total nominal mass per unit area 22kg/m²) both sides.
- **ROCKWOOL FLEXI®:** a minimum of 60mm in both wall frames.

Thermal Regulations:

Minimising heat loss via party walls

To assist in achieving a zero U-value for thermal applications we would recommend the following:

1. Fully fill the depth of the studs in both wall frames with 90mm ROCKWOOL FLEXI® (this assumes the depth of the stud to be 89mm).
2. Fully fill the cavity space between the wall frames with 60mm FLEXI® batt (this assumes the cavity width to be 60mm).

Robust details:

E-WT-2 Separating wall - timber frame

The following are required:

- **Wall width:** a minimum of 240mm between inner faces of wall linings and a 50mm gap between studs.
- **Wall lining:** 2 or more layers of gypsum-based board (total nominal mass per unit area 22kg/m²) both sides.
- **ROCKWOOL FLEXI®:** a minimum of 60mm in both wall frames.

Thermal Regulations:

Minimising heat loss via party walls

To assist in achieving a zero U-value for thermal applications we would recommend the following:

1. Use a minimum thickness of 60mm FLEXI® between studs in each frame.
2. Fully fill the cavity space between the wall panels with *60mm FLEXI® batt.

Note: for this construction type, the thickness of insulation used to fully fill the cavity should be 10mm wider than the as built cavity width. eg. use 60mm FLEXI® in 50mm Cavities or 70mm FLEXI® in a 60mm Cavity

Figure 2

Robust details - E-WT-1 Separating timber framed walls



Figure 3

Robust details - E-WT-2 Separating wall - timber frame



Robust details:

E-WS-1 Separating wall - steel frame

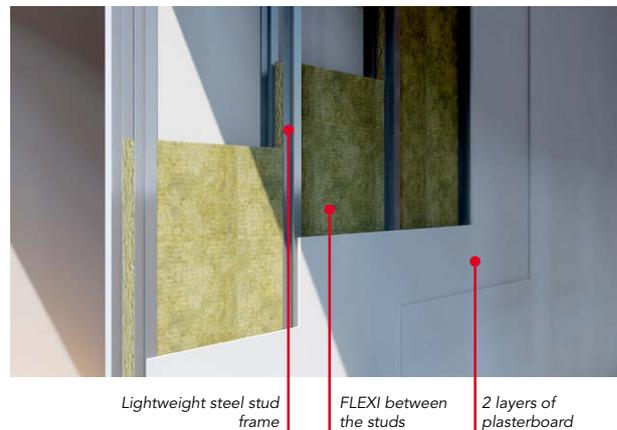
The following are required:

- **Wall width:** a minimum of 200mm between inner faces of wall linings.
- **Wall lining:** 2 or more layers of gypsum-based board (total nominal mass per unit area 22kg/m²) both sides.
- **ROCKWOOL FLEXI®:** a minimum of 50mm fully filling the cavity between frames (this thickness will vary pending as built cavity width).

Note: The steel frame profiles shown are indicative only. Other profiles are acceptable. This robust detail is only suitable for use in lightweight steel frame houses and flats/apartments.

Figure 4

E-WS-1 Separating wall - steel frame



Acoustic applications – partitions:

ROCKWOOL FLEXI® will provide both acoustic and fire benefits when used in partitions.

Lightweight domestic timber stud partition: meeting Approved Document E2 (domestic internal partitions)

Solution 1 - Timber frame

The following are required:

- **Studs:** 38x75 timber studs at 600mm centres
- **Facings:** 1 layer 12.5mm acoustic rated plasterboard (11 kg/m²) each side
- **Insulation:** a minimum of 50mm of ROCKWOOL FLEXI®

Figure 5

Solution 1 - Timber frame



Solution 2 - Metal frame - Lightweight domestic metal stud

The following are required:

- **Studs:** 38x75 timber studs at 600mm centres
- **Facings:** 2 layers of 12.5 mm standard plasterboard (16kg/m²) each side
- **Insulation:** a minimum of 50mm of ROCKWOOL FLEXI®

Figure 6

Solution 2 - Metal frame - Lightweight domestic metal stud



Enhanced performance (timber frame) - Typical office partition adjacent to factory

The following are required:

- Studs: 38x75 timber studs at 600mm centres
- Facings: 2 layers of 12.5mm standard plasterboard (16kg/m²) each side
- Insulation: a minimum of 50mm of ROCKWOOL FLEXI®

Enhanced performance (metal frame) - Schools, offices and public buildings:

NBS Plus Clause K10:115, K10:125

The following are required:

- Studs: 70mm metal studs at 600mm centres
- Facings: 2 layers of 15.0mm acoustic rated plasterboard (26kg/m²) each side
- Insulation: a minimum of 70mm of ROCKWOOL FLEXI®

Alternative ROCKWOOL systems for Approved Document E compliance:

The following are required:

- 18mm of tongue and groove flooring grade chipboard
- 15mm acoustic rated plasterboard with a minimum mass 12.5kg/m² mass per unit area
- 50mm of ROCKWOOL ROCKFLOOR resilient layer
- 15mm of OSB on 200x50mm timber joists at 400mm centres
- 100mm of ROCKWOOL FLEXI® between joists
- Resilient bars fixed at right angles to joists at 400mm centres
- Ceiling finish: 2 layers of 15mm acoustic rated plasterboard (26kg/m²)
- Pre-completion site testing required on site

Figure 7

Enhanced performance (timber frame)

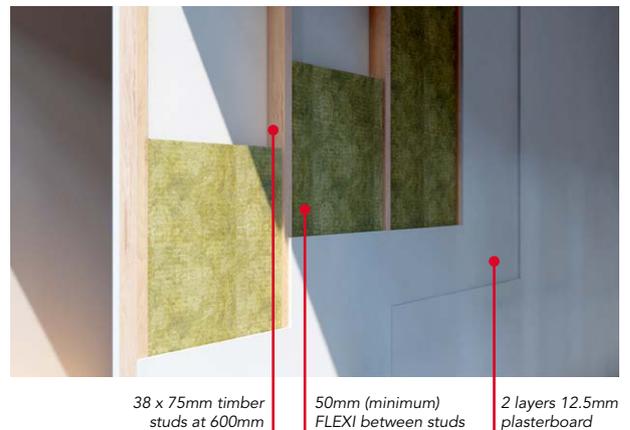


Figure 8

Enhanced performance (metal frame)

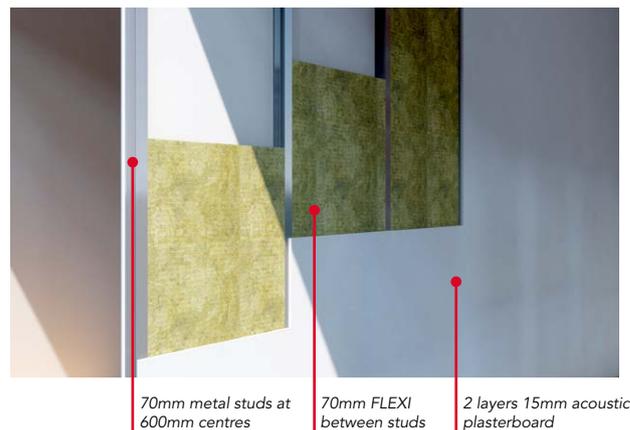
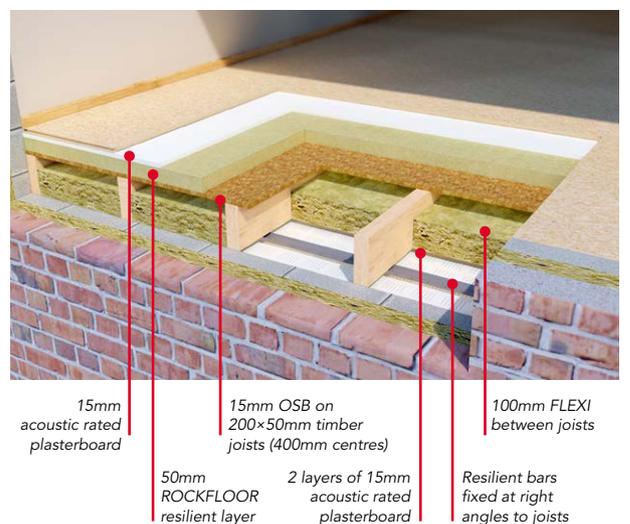


Figure 9

Alternative ROCKWOOL systems for Approved Document E compliance



Internal floors:

The following are required:

- 18mm of tongue and groove flooring grade chipboard with a mass per unit area of 12.4 kg/m²
- Timber joists at 400mm centres
- 100mm of ROCKWOOL FLEXI® between joists
- A single layer of standard 12.5mm plasterboard ceiling with a mass per unit area of 8kg/m²

Separating floors:

The following are required:

- A minimum of 2 layers of board material to provide minimum a total mass of 25kg/m², spot bonded together with joints staggered (eg 18mm of tongue and groove flooring grade chipboard and 19mm of plasterboard plank)
- 25mm (min) ROCKWOOL ROCKFLOOR® resilient layer
- The floating layer to be loose laid over the ROCKFLOOR®
- Existing floor deck on existing timber floor joists
- 100mm of ROCKWOOL FLEXI®
- Existing ceiling should be upgraded to 20kg/m². If the existing ceiling is of lath & plaster it should be retained, providing it satisfies Part B – Fire Safety (if in doubt then underdraw the ceiling with an additional layer of 12.5mm fire rated plasterboard and screw into the joists).
- Pre-completion site testing

Acoustic applications – separating walls:

The following are required:

- A minimum of 100mm of existing solid masonry wall, plastered on both faces
- Independent timber or steel studs. A minimum 10mm gap to be maintained between the frame and the existing wall
- 50mm of ROCKWOOL FLEXI® between studs
- 2 layers of plasterboard at a minimum of 20kg/m² (approximately equal to 2×15 mm layers)
- Avoid flanking transmission: seal perimeter edges of new plasterboard with tape or ROCKWOOL Intumescent Sealant
- If the existing masonry wall is not plastered or is less than 100mm thick then independent panels should be applied to both sides
- Pre-completion site testing

Figure 10
Internal floors

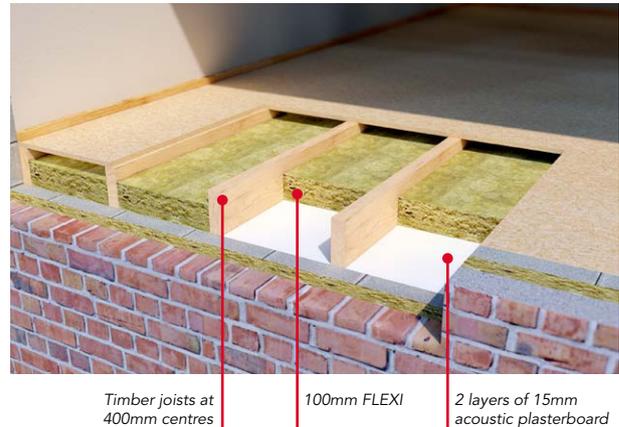


Figure 11
Separating floors

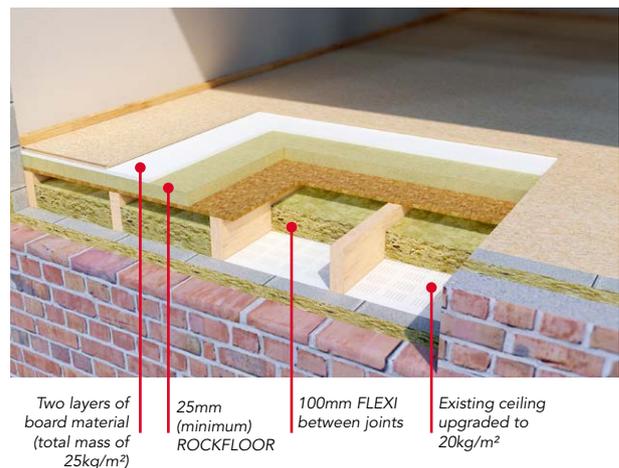


Figure 12
Acoustic applications – separating walls

