STEEL FRAME SLAB
Non-combustible thermal insulation designed specifically for steel frames
STEEL FRAME SLAB

ROCKWOOL Steel Frame Slab delivers performance to meet and exceed thermal building regulations for external walls in steel frame buildings.

Being made from stone wool means the highest Euroclass A1 reaction to fire as well as exceptional sound absorption properties. The Steel Frame Slab delivers thermal performance at an optimal weight and features dimensions tailored for steel frame walls.
Description

ROCKWOOL Steel Frame Slab is a semi-rigid insulation designed specifically for use between the studs in light gauge steel frame walls. The slabs deliver insulation with optimised density and performance; offering a low thermal conductivity, exceptional resistance to fire and outstanding sound absorption.

ROCKWOOL Steel Frame Slab has been tested to BS EN 13501-1 to achieve the best possible Euroclass reaction to fire classification - A1. ROCKWOOL stone wool acts as a barrier to fire, withstanding temperatures over 1,000°C and, crucially, does not produce toxic smoke.

ROCKWOOL stone wool insulation is also a highly effective thermal insulator, maintaining a comfortable indoor environment by protecting against fluctuations in outside temperature. ROCKWOOL Steel Frame Slab has been tested to BS EN 13162, achieving a thermal conductivity of 0.034 W/mK, at a low product weight - assisting in handling and installation, increasing the volume of product per pack and maximising the efficiency of the ROCKWOOL compression packing technology to improve both transport and storage efficiency.

Urbanisation is a strong trend that brings many benefits. However, with this comes busier roads, railways and airports, a higher population density and more sources of noise.

Advantages

- **Thermal performance - low thermal conductivity of 0.034 W/mK**
- **Non-combustible, non-toxic - Euroclass fire rating of A1**
- **Excellent sound absorption - high density, stone wool fibres**
- **Breathable - water repellent, and vapour permeable. Helps prevent rot and mould**
- **Durability - no slumping or sagging, maintains performance over time**
- **Sustainability - produced from abundant, renewable volcanic rock. 97% recyclable**

ROCKWOOL stone wool insulation can help to combat this increasingly important issue. Made up of thousands of high-density stone wool fibres that trap sound waves and absorb vibration, ROCKWOOL Steel Frame Slab helps to prevent unwanted noise from disturbing indoor comfort.

Another benefit of ROCKWOOL stone wool insulation is its ability to repel liquid water, while still allowing water vapour to pass through. This allows the construction to both stay dry and be able to breathe; reducing the risk of condensation, which can lead to rot, mould and humidity damage.

Stone wool insulation has a unique physical structure, meaning that it keeps its shape over time, despite changes in temperature or humidity. This dimensional stability means performance is maintained through a building’s lifetime. With a 600mm slab width and a dense, smart fibre structure, ROCKWOOL Steel Frame Slab is also quick and easy to fit, creating minimal waste. The slabs are robust and do not sag or slump, nor leave performance sapping gaps in the insulation layer; maximising in-situ performance.
Applications
ROCKWOOL Steel Frame Slab has been designed specifically for quick and easy installation into standard size 600mm steel studs. This means less time to install, and a more reliable and long-lasting fit.

Performance

Thermal resistance
Tested to BS EN 13162:2012 + A1:2015 achieving a lambda value of 0.034 W/mK. Able to meet or exceed Part L (Conservation of fuel and power) of the building regulations.

Reaction to fire
Tested to BS EN 13501-1 achieving a Euroclass A1 classification using test data from the reaction to fire test.

Acoustic performance
The Steel Frame Slab can significantly reduce outside sources of noise when used in an external wall.

Water resistance
ROCKWOOL stone wool repels liquid water due to its fibre orientation and a water-repellent additive.

Condensation control
Vapour resistivity = 5.9 MNs/gm. Prevents ingress of liquid water but allows the escape of water vapour. ROCKWOOL stone wool insulation allows the construction to breathe, reducing the risk of condensation, which can lead to rot, mould and humidity damage.

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>Width (mm)</th>
<th>Length (mm)</th>
<th>Pieces / pack</th>
<th>Area / pack (m²)</th>
<th>Packs / pallet</th>
<th>Area / pallet (m²)</th>
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</thead>
<tbody>
<tr>
<td>90</td>
<td>600</td>
<td>1200</td>
<td>6</td>
<td>4.32</td>
<td>12</td>
<td>51.84</td>
</tr>
<tr>
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<td>600</td>
<td>1200</td>
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<td>4.32</td>
<td>12</td>
<td>51.84</td>
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<tr>
<td>120</td>
<td>600</td>
<td>1200</td>
<td>5</td>
<td>3.60</td>
<td>12</td>
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<tr>
<td>150</td>
<td>600</td>
<td>1200</td>
<td>4</td>
<td>2.88</td>
<td>12</td>
<td>34.56</td>
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</table>

Standards and approvals
ROCKWOOL Steel Frame Slab has been tested to the requirements of BS EN 13162:2012 + A1:2015 ‘Thermal insulation products for buildings – Factory made mineral wool (MW) products – specification’.

Installation
With an engineered optimal density, the Steel Frame Slabs are light and easy to install, sized to friction fit into 600mm steel studs without the need to cut or create waste. Any cutting that is required can be done quickly and easily, event in awkward spacing, using a sharp knife. The slabs are compressed and shrink wrapped in polyethylene film, supplied on pallets shrouded with a waterproof hood suitable for outside storage.
Typical wall constructions and u-value are listed in the tables below:

**External wall U-values – Example steel frame constructions**

1. **Steel Framing System / In-fill Walling with Rainscreen Facade**

<table>
<thead>
<tr>
<th>U-value (W/m²K)</th>
<th>Stud depth (mm)</th>
<th>Steel Frame Slab (mm)</th>
<th>RAINSCREEN DUO Slab (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.15</td>
<td>150</td>
<td>150</td>
<td>200</td>
</tr>
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<td>0.18</td>
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<td>125</td>
</tr>
<tr>
<td>0.25</td>
<td>150</td>
<td>150</td>
<td>75</td>
</tr>
<tr>
<td>0.18</td>
<td>100</td>
<td>100</td>
<td>180</td>
</tr>
<tr>
<td>0.20</td>
<td>100</td>
<td>100</td>
<td>150</td>
</tr>
<tr>
<td>0.25</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

2. **Steel Frame System with Brick Outer**

<table>
<thead>
<tr>
<th>U-value (W/m²K)</th>
<th>Stud depth (mm)</th>
<th>Steel Frame Slab (mm)</th>
<th>RAINSCREEN DUO Slab (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.27</td>
<td>100</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>0.24</td>
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<tr>
<td>0.19</td>
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<td>100</td>
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</tr>
<tr>
<td>0.17</td>
<td>150</td>
<td>150</td>
<td>100</td>
</tr>
</tbody>
</table>
Sustainability

As an environmentally conscious company, ROCKWOOL promotes the sustainable production and use of insulation and is committed to a continuous process of environmental improvement.

All ROCKWOOL products provide outstanding thermal protection as well as four added benefits:

Environment

Made from a renewable and plentiful naturally occurring resource, ROCKWOOL insulation saves fuel costs and energy in use and relies on trapped air for its thermal properties.

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

ROCKWOOL is approximately 97% recyclable. For waste ROCKWOOL material that may be generated during installation or at end of life, we are happy to discuss the individual requirements of contractors and users considering returning these materials to our factory for recycling.

Health & Safety

The safety of ROCKWOOL stone wool is confirmed by current UK and Republic of Ireland health & safety regulations and EU directive 97/69/EC: ROCKWOOL fibres are not classified as a possible human carcinogen.

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

Interested?

For further information, contact the Technical Solutions Team on 01656 868490 or email technical.solutions@rockwool.co.uk

Visit www.rockwool.co.uk to view our complete range of products and services.

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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.

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