Rock Wool is a high quality resin bonded slab, with a predominantly vertical fibre structure. The product provides an insulation core for use in sandwich panel systems. Rock Wool panels offer a significant contribution towards improved fire safety.

If exposed to fire, Rock Wool will not release dense smoke and will withstand temperatures in excess of 1000°C.

**Advantages:**
- Excellent thermal & acoustic properties
- Fire safe
- High compressive strength
- Dimensionally stable
- Water repellent
- Chemically inert
- Completely recyclable
- CFC and HCFC free

**Disadvantages:**
- The price is higher
- The panels are fragile and need to be handled carefully
- The panels can delaminate with dynamic loading of excessive foot traffic
- The core materials are imported which adds 10-12 weeks lead time to the start of installation
- The high panel weight requires mechanical equipment for installation

*When used in cold room applications care should be taken to ensure adequate vapour sealing can be carried out.*
Because of the attitude towards the use of composite sandwich panels in food processing factories, in particular, it is necessary to consider the use of these types of panel and the areas in and around which they are intended for.

In order to obtain the best result when using these panels it is important that a proper design procedure is followed:

- Full fire risk assessment of the building and processes (high or low risk)
- The need for self-contained and stable enclosures and compartmentation
- The combustibility and fire performance of the panel core
- Panel joints and fixing detail.
- Full consideration given to active, as well as passive, fire suppression systems.

In short, a complete fire safety management approach.

**Technical Data**

Performance of the panel varies with thickness and the following table gives recommended usage limits

<table>
<thead>
<tr>
<th>Core Thickness (mm)</th>
<th>Max. Un-supported Wall Height (mm)</th>
<th>Panel Weight (0.6mm coil) (kg/m²)</th>
<th>Max Un-supported Ceiling Length (mm)</th>
<th>Panel Weight (0.7mm coil) (kg/m²)</th>
<th>‘U’ Value (W/m².K)</th>
<th>‘R’ Value (m².K/W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>5000</td>
<td>14.5</td>
<td>3000</td>
<td>15.75</td>
<td>0.80</td>
<td>1.25</td>
</tr>
<tr>
<td>75</td>
<td>6000</td>
<td>17.25</td>
<td>4000</td>
<td>19.25</td>
<td>0.53</td>
<td>1.88</td>
</tr>
<tr>
<td>100</td>
<td>7000</td>
<td>20</td>
<td>5000</td>
<td>22.5</td>
<td>0.40</td>
<td>2.50</td>
</tr>
<tr>
<td>125</td>
<td>7500</td>
<td>22.75</td>
<td>6000</td>
<td>25.9</td>
<td>0.32</td>
<td>3.12</td>
</tr>
<tr>
<td>150</td>
<td>8000</td>
<td>25.5</td>
<td>7000</td>
<td>29.25</td>
<td>0.20</td>
<td>5.00</td>
</tr>
</tbody>
</table>

All maximum ceiling spans must be reduced by 25% if exposed to direct sunlight.

**Recommended Fixing Detail**

It is important that in the case of fire rated panels the fixing details are designed so that the panels are retained in position in the event of a fire.

Therefore:

- All fixings should be steel and not aluminium.
- Steel angles/ channels to be a minimum of 1.6mm thick.
- All rivets to be stainless steel.
Steel Rivets @ 400 crs. to panel skin
Sealants=White silicon & Fire mastic

Isowall ceiling panel

30x30x2mm Galvanized angle
Steel Rivets @ 400 crs. to panel skin
Sealants=White silicon.

Isowall wall panel

30x30x2mm Galvanized angle
Steel Rivets @ 400 crs. to panel skin
Plastic plugs @ 500 crs. to conc. floor
Sealants=White sikaflex, Grey Sikaflex & Fire Mastic

OUTSIDE

INSIDE

All data conforms to current best practice and is for guidance only. For specific conditions of use please refer to our Technical Department. Isowall Southern Africa reserves the right to alter specifications without prior notice.