## MAGBOARD FLOOR / CEILING PANEL IS A CEMENT BONDED PARTICLE BOARD MANUFACTURED TO BS EN 634-1 AND 2.

Magboard floor / ceiling panel is a cement bonded particle board intended for both internal and external use which has very high levels of performance in the presence of moisture and has high resistance to fire.

Magboard floor / ceiling panel conforms to the European Standards EN 634-2 for cement bonded particle boards. This specifies the requirements for particle boards bonded with Ordinary Portland Cement (OPC) for use in dry, humid and exterior conditions. Magboard floor / ceiling panel is CE marked in accordance with EN 13986.

Magboard floor / ceiling panel also complies with the general requirements as listed in EN634-1 together with the requirements set out in table 1 of this standard.

**Composition and Manufacture**
Cement bonded particle board generally (but not exclusively) comprises wood particles bonded with ordinary Portland cement. Wood is the predominant component by volume but cement is predominant by weight. Small quantities of chemicals are added to the wet mix, one of their purposes is to accelerate cement setting.

**Size**
Board sizes generally available are 2400 x 1200, 2800 x 1200 and 3050 x 1220mm in thickness of 8mm to 40mm. Square edged boards are standard although other edge details are available (see EV2).

**Weight**
Typical density of boards are 1300 kg/m3 for example a 2400 x 1200 x 12mm board will weigh approximately 45 kilograms.

**Appearance**
Standard unsanded boards are generally light grey in colour with a smooth cementitious surface. Although generally smooth this should not be relied upon for decoration.

**Worldwide Standards**
Magboard floor / ceiling panel is sold worldwide and has gained acceptance to various country standards by meeting and in many cases exceeding the required performances in applications. Further information is available on request.

Technical assessment papers on Cement Bonded Particle Board are available from the Building Research Establishment .Who have carried out extensive research on the Generic material.

## INTRODUCTION

Magboard floor / ceiling panel the versatile cement bonded particle board is suitable for a wide range of applications. Cement particle board represents an advantage in building board technology to meet increasingly stringent building regulations and demands for ever higher standards of durability, safety and economy.

Magboard floor / ceiling panel board contains no hazardous volatiles, it is asbestos free and its process dust is non- aggressive. It may be sawn, planed, sanded, drilled, routed, nailed and screwed.

Magboard floor / ceiling panel – the main properties are fire resistance with excellent sound attenuation. It is durable, even when unprotected, and is able to withstand the destructive influences of weather, moisture, insects, vermin and fungi. It is robust against impact, therefore the possibility of damage is reduced. It will not build up static charges. It will also accept a wide variety of finishes.

Magboard floor / ceiling panel – made from the traditional building materials, cement and wood. The special process of blending results in a board having a unique combination of properties relevant to current needs. Due to the monolithic structure any exposed sawn edges are not vulnerable to weather damage.

**Specifications**
Finishes – Magboard floor / ceiling panel board is smooth in texture and light grey in colour. It is available in two types of finish: unsanded and calibrated. Calibrated is normal production, simultaneously sanded on both sides; it is used where minimal thickness tolerance is required. Although generally smooth this should not be relied upon for decoration

**Edges**
Plain or profiled are available.

**Magboard floor / ceiling panel** is a cement bonded particle board comprising of wood particles and cement.

**Magboard floor / ceiling panel** is a High Performance Panel its principal attributes are: durability, fire resistance, sound reduction, it is resistant to attack from termites, insects and fungus.

**Magboard floor / ceiling panel** is produced in sizes:

2400 x 1200 2800 x 1200 3050 x 1220 2600 x 1200

**Magboard floor / ceiling panel** is available in a wide range of thicknesses 8mm - 40mm.

**Magboard floor / ceiling panel** is manufactured either unsanded or calibrated.

**Magboard floor / ceiling panel** is available with an optional Primer/Sealer factory applied.

**Magboard floor / ceiling panel** may have a wide range of surface treatments applied.

## INTERNAL, EXTERNAL & OTHER APPLICATIONS

### Internal

Magboard floor / ceiling panel board has advantages over other types of board materials due to its strength, workability and durability coupled with the three main attributes: fire resistance, sound reduction and moisture resistance.

Magboard floor / ceiling panel may be confidently used in wet areas. It has anti-fungal properties and so is ideal for cold storage, food processing and all areas which highlight the importance of hygiene.

Magboard floor / ceiling panel is first choice for internal walls and partitions in domestic or public buildings due to its impact resistance, fire resistance and sound reduction properties.

### External

Magboard floor / ceiling panel has proven performance as an external cladding material - Magboard floor / ceiling panel has been successfully used in prefabricated panel construction - both single skin and sandwich application. Also, due to the excellent "racking" properties of Magboard floor / ceiling panel, the board may be utilised as a structural member in a composite building application.

Magboard floor / ceiling panel in an untreated state is weather resistant and will not degrade with permanent exposure, even if subjected to freeze/thaw conditions. However, in general, a surface treatment is
recommended for external applications. A wide range of paint, tile and textured finishes may be used.

# HEALTH & SAFETY

## 1. PRODUCT INFORMATION

Trade Name **Magboard floor ceiling panel** Generic Name: Cement Bonded Particle Board

Supplier: Magboard Benelux Products

## 2. PRODUCT INGREDIENTS

Manufactured from:

| | | | |
|---|---|---|---|
| Portland Cement | Water | Wood Fibres | Chemical Additives |

## 3. PHYSICAL DATA

Appearance & Odour: Grey Sheet - No Odour

| | | | |
|---|---|---|---|
| Boiling Point: | NA | % Volatile by volume: | 0 |
| Vapour Pressure: | NA | Melting Point: | NA |
| Water Solubility%: | NA | Specific Gravity: | 1.25 |
| Evapouration Rate: | Nil | Density: | 1300kg/$m^3$ |
| Surface pH: | 11-13 | | |

## 4. FIRE & EXPLOSION DATA

| | |
|---|---|
| Flash Point: | NA |
| Extinguishing Media: | Foam, Water |
| Unusual Fire or Explosion Hazard: | None |
| Special Fire Fighting Procedures: | None |
| Flammability: | NA |

## 5. FIRST AID MEASURES

Eye Contact: Flush eyes immediately with water or physiological saline for at least 15 minutes, then if necessary remove contact lenses and open eye widely. Seek medical advice if irritation persists.

Skin Contact: Use water to wash skin thoroughly.

Ingestion: Flush mouth and drink plenty of water.

Inhalation: Take person to an area away from product and where they can inhale plenty of fresh air.

If necessary to seek medical advice take this data sheet with you to the doctor or casualty department.

## 6. TOXICOLOGICAL INFORMATION

Short term effects: Routes:

Eyes - Dust may cause temporary irritation and watering of the eyes.
Lungs - Dust may result in irritation of the respiratory tract.
Ingestion – Mild discomfort.

Long term effects – Prolonged inhalation of high concentrations of the dust may cause respiratory conditions.

## 7. ACCIDENTAL RELEASE MEASURES

Collect dust with a type H vacuum cleaner that should comply to BS 5415 as a minimum or soak with water and brush up the dust. Restrict spreading and refer to handling procedures. Make sure to use personal safety equipment.

## 8. PERSONAL PROTECTION

| | |
|---|---|
| Eyes: | Safety Glasses for dust protection. |
| Skin: | Protective gloves, normal working overalls. |
| Inhalation: | Mask with dust type filter P2 , make sure to change filters as necessary. |
| Work Environment: | The work area should be well ventilated. |

## 9. HANDLING

When drilling or cutting effective emission ventilation should be in place. The use of high speed cutting tools should be avoided unless emission ventilation (dust extraction) is in place.

## 10. FIRE MEASURES

No special fire precautions are necessary. Firefighting equipment is not applicable. Hazardous decomposition products – not flammable. Small quantity of carbon monoxide and carbon dioxide.

## 11. OTHER INFORMATION

Occupational Exposure Standard (OES)
Portland cement OES 10mg/m3 total dust 5mg/m3 respirable dust, 8 hr time weighted averages.
Cellulose OES 10mg/m3 total dust, 5mg/m3 respirable dust, 8 hr time weighted averages.
Soluble Aluminium Salts OES 2mg/m3 total inhalable dust

# PROCESSING

## MACHINING

Magboard floor / ceiling panel is machined and processed in the same manner as resin bonded particle boards, but ensuring that tungsten carbide tipped blades are used at all times. Comprehensive tests have shown that wear on tools during the processing of Magboard floor / ceiling panel is significantly lower when compared with resin bonded board. This is due to the lack of resinification and a lower degree of heating.

## SAWING

Equipment

- Cross cut hand saws for thicknesses up to 12mm.
- Jigsaw for thicknesses up to 12mm and small work.
- Portable circular saw.
- Fixed saw for dimensioning (vertical or horizontal).

Type of blade.

- Alternative or trapezoidal teeth.
- Chart shows number of revolutions and number of teeth (Z).

| Diameter mm | 250 | 300 | 350 | 400 |
|---|---|---|---|---|
| Panel thickness up to 12mm | Z=48 | Z=60 | Z=72 | Z=72 |
| Panel thickness exceeding 12mm | Z=36 | Z=48 | Z=54 | Z=60 |
| Number of revolutions rpm | 3000/4500 | 3000 | 3000 | 3000/1500 |

## MILLING

Common machines with carbide-tipped tools. The higher the rpm, the better the milled edge.

## COUNTERSINKING DRILLING

Magboard floor / ceiling panel can be drilled using conventional portable drilling machines; high speed steel drills or tungsten carbide drills (for prolonged use) and central tip for precision drilling. Although Magboard floor / ceiling panel is a wood and cement panel it is not concrete and therefore does not require percussion drilling The drilling speeds are the same as for chip-board panels (3000/4000 rpm).

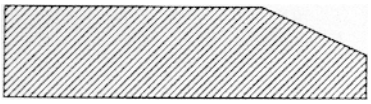
## SANDING

Magboard floor / ceiling panel can be sanded using a vibrating sanding machine or belt sanding machine. Belts should be 40-80 grains; open coat structure with linear speed of 20 to 28 m/sec. When working in confined areas dust extraction equipment is recommended.

## SANDING

Hand-hold Orbital Sander, Hand-held Belt Sander. When used indoors, use vacuum dust extr

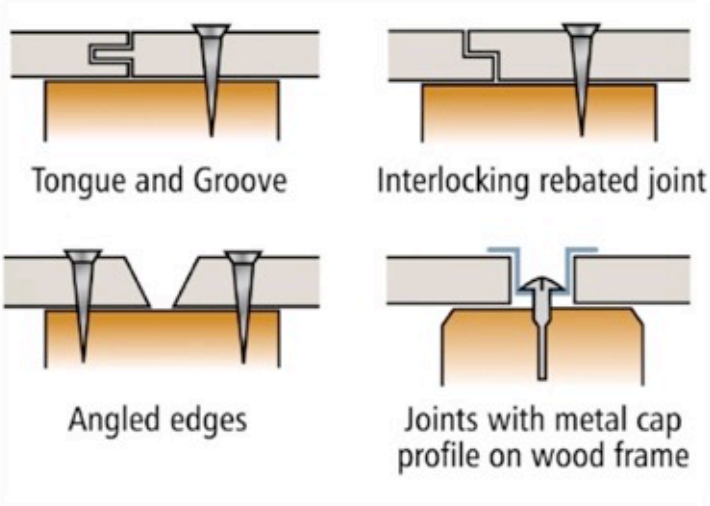
## EDGING & JOINTING DETAIL



**Minimum thickness: 16mm**

**Minimum thickness: 12mm**

**Minimum thickness: 18mm**



# MOUNTING & FIXING

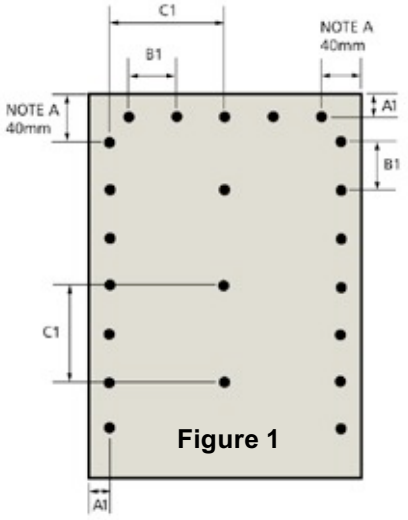
## MOUNTING

Magboard floor / ceiling panel can be fixed using nails, screws or staples and is also suitable for manual, pneumatic and powered fixing methods. The following table is a guide to fixing distances for most common applications; however, the details are not sufficient when Magboard floor / ceiling panel is to be subjected to particular structural forces such as wind suction or loading on ceiling soffits etc. In such cases further advice should be obtained.

## FIXING DISTANCES

**Figure 1**

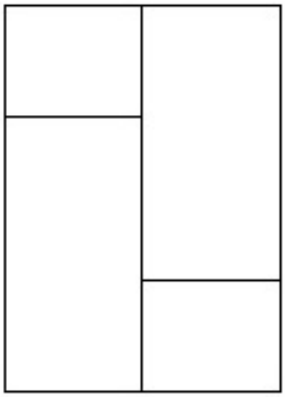
| Board Thickness | Centres mm | | | |
|---|---|---|---|---|
| mm | A | A1 | B1 | C1 |
| 8 | 40 | 15 | 200 | 400 |
| 10 - 12 | 40 | 15 | 300 | 600 |
| 16 + | 40 | 30 | 400 | 600 |




NOTE A - The first fixing in from the corner for both horizontal and vertical fixing must be 40mm in from edg

## BOARD ARRANGEMENT

We recommend that Magboard floor / ceiling panel should be installed in brick Bond fashion as per the diagram. For further information please contact Magboard Benelux Products.



### NOTE

- Do not use 4 way joints.
- Minimum board width should not be less than 100mm.

### EXPANSION/MOVEMENT JOINTS

Magboard floor / ceiling panel can be affected by slight dimensional changes according to variation in relative humidity. Fixings and in particular the joints
between the panels must allow for movement. E.g. oversize the screw hole and leave a 3-6mm gap at the joint.
Joints can be filled with Intumescent joint compound.

When Magboard floor / ceiling panel is being used as a carrier board to an insulated render system (EIFS) please contact Magboard Benelux to obtain an additional fixing instruction manual. When applying direct render to a substrate panel, Magboard Benelux recommends the use of Magboard. Please see the website or contact the sales office for details of application or product compatibility.

## BONDING

Only alkali resistant adhesives should be used, suitable for Magboard floor / ceiling panel pH value of 11-13. For high-quality bonding, Magboard floor / ceiling panel with calibrated surfaces are most suitable.
For adhesive bonding my means of hot pressing, a board moisture content of no more than 6% -9% is required but this should be determined with the adhesive manufacturer. When bonding to one face of Magboard floor / ceiling panel the reverse should always be counterbalanced. For large-area adhesive bonding, some
pre-testing should always be carried out in cooperation with the adhesive manufacturer.

### Applications and Types of Adhesives

Tiling Magboard floor / ceiling panel for internal walling applications should be limited to single panel applications. The type of Magboard floor / ceiling panel to be used should be factory primer/sealed. The board should be supported on all edges with support centres not exceeding 400mm. A minimum thickness of 10mm board should be used with all screw fixings at nominal 300mm centres and screw holes oversized. Without sealing the back of the boards, moisture can penetrate the board, which can result in distortion. Distortion can also take place when the back of the board dries out on one side only. For adhesive bonding to free floating floors Magboard floor / ceiling panel primed on both sides should be used, to avoid one-sided penetration of moisture which could lead to distortion. Boards with a calibrated surface can easily absorb moisture.

### Full Surface Bonding of Magboard floor / ceiling panel to Each Other

Dry Rooms: Dispersion adhesive or one component reaction resin adhesives.
Wet Rooms: Double component resin adhesive polyurethane based or epoxy resin adhesive.

### Bonding of Tongue & Grooved Edges

PUD 4 one pack polyurethane adhesive as supplied by Magboard Benelux Products is recommended for this application for wet or dry environments.

### Full Surface Bonding of Laminates and Veneers

Magboard floor / ceiling panel is an excellent substrate for the application of decorative laminates and veneers. The sanded/calibrated finish should always be used, when bonding a decorative surface to one face the reverse of the panel must have a compensator layer applied. With timber veneers a cross band veneer is usually required.

In all instances the above operations should be carried out by experienced companies specialising in bonding techniques using the input from adhesive manufacturers for bonding to cement board material.

### Note

Always consult adhesive manufacturer and laminate manufacturer for technical assistance on suitability of use. Always test a small sample of the materials before application.

## TECHNICAL DATA

### Product Range

| | | |
|---|---|---|
| Panel Type: | unsanded<br>calibrated | |
| Standard Sizes | 2400 x 1200mm | Thicknesses:<br>Unsanded: 8 10 12 14 16 18 20 22 24 28 30 32 36 40mm |
| Non Standard Sizes | 2600 x 1200mm<br>3050 x 1220mm<br>2800 x 1200mm | Calibrated: 8 10 12 14 16 18 20 22 24 28 36mm |

**Special sizes of panel and thicknesses are available on request.**

| | | | |
|---|---|---|---|
| Density (average) | 1300Kg/m3 | Surface Alkalinity | pH between 11 and 13 |
| Modulus of Elasticity | 4500N/mm2 | Moisture Content (ex production) | 9% ± 3% by weight |
| 1. Thickness tolerances<br>Calibrated:<br>Unsanded:<br><br><br>2. Length:<br>3. Width:<br>4. Squareness: | <br>8-37mm±0.3mm<br>8-10mm±0.7mm<br>12-19mm±1.0mm<br>22-42mm±1.5mm<br>±5mm<br>±5mm<br>-2.5mm on panel diagonal difference | Thickness Swelling (24hrs immersion) | 0.7% (average) |
| | | Dimensional Stability | 0.11% for an increase in relative humidity from 65% to 90%<br><br>0.16% for an increase in relative humidity from 65% to saturation |
| Bending Strength (min) | 9N/mm2 | Thermal Conductivity Coefficient | 0.26.W/m.k. |
| Permissible design value | 2.25 N/mm2 | Sound Insulation | See characteristics guide Also acoustic information |
| Tensile strength (parallel to surface) | 4.0N/mm2 | Fire Rating | Tested to BS 476 Part 6.7 - classified as Class 0 building board with a Class 1 surface spread of flame.<br>European classification to EN 13501-1: B1<br>(B-s1 d0 excluding floors), (Bfl-s1 floors)<br><br>For further information see Fire Information. |
| Tensile strength (perpendicular to surface) | 0.5Nmm2 | Bonding Agent | Magboard floor / ceiling panel is odourless, Since the bonding agent is free from formaldehyde. |
| Compression strength (min) | 15 N/mm2 | | |

## MAGBOARD FLOOR / CEILING PANEL CHARACTERISTICS

| | | Unsanded and Calibrated Only | | | | | | | | | | | Calibrated Only | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness of board in mm | | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 28 | 30 | 36 | 40 |
| Approx. kg per square metre | | 10.4 | 13 | 15.6 | 18.2 | 20.8 | 23.4 | 26 | 28.6 | 31.2 | 36.4 | 39 | 46.8 | 52 |
| Airbourne sound reduction for single board in dB | | 30 | 31 | 31 | 32 | 33 | 33 | 34 | 34 | 35 | 36 | 36 | 37 | 38 |
| Manual nailing without pre-drilled holes | | " | " | " | " | | | | | | | | | |
| Manual screwing with pre-drilled holes | | " | " | " | " | " | " | " | " | " | " | " | " | " |
| Power screwing & nailing without pre-drilled holes | | " | " | " | " | " | " | " | " | " | " | " | " | " |
| Nailing and screwing into edges | | | | | | " | " | " | " | " | " | " | " | " |
| Edge Profiling | Rebated | | | | " | " | " | " | " | " | " | " | " | " |
| | Grooved for inserted tongue | | | | " | " | " | " | " | " | " | " | " | " |
| | Tongue & Grooved | | | | | " | " | " | " | " | " | " | " | " |
| General internal linings & ext. claddings | Studs at 400mm centres | " | | | | | | | | | | | | |
| | Studs at 500mm centres | | | | | " | " | " | " | | | | | |
| | Studs at 600mm centres | | " | " | " | " | " | " | " | " | " | " | " | " |
| Ceilings and soffits | Joists at 400mm centres | " | " | " | " | | | | | | | | | |
| | Joists at 600mm centres | | | " | " | " | " | " | " | " | " | " | " | " |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

### Approximate Number of Boards Per Pallet

(subject to variation)

| Board Size | No. of Boards |
|---|---|
| 8mm | 63 |
| 10mm | 52 |
| 12mm | 43 |
| 16mm | 33 |
| 18mm | 28 |
| 22mm | 25 |
| 25mm | 22 |
| 28mm | 20 |
| 32mm | 18 |
| 36mm | 15 |

## FIRE PERFORMANCES

As a single board material, Magboard floor / ceiling panel is probably one of the most versatile flat sheet materials available when it comes to application in areas which have to be fire rated.

Magboard floor / ceiling panel's wide range of thicknesses combined with its

unique quantities of: Resistance to moisture
Resistance to impact
High acoustic performance For
use internally or externally
Smooth surfaces
Making it a very cost effective solution for fire protection.

Magboard floor / ceiling panel has been tested in accordance with BS 476 which is the fire test relevant to building materials and structures.

### FIRE PROPAGATION. PART 6: 1981

This test measures the amount and rate of heat evolved by the material while subjected to standard heating conditions. Test results are given as an index of performance (1) which is based on three sub-indices ($i_1$ '$i_2$'$i_3$). The higher the value of the index of performance, 1, the greater is the materials contribution to fire growth. The higher the value of sub-index, $i_1$ the greater the ease of ignition and flame spread.

### SURFACE SPREAD OF FLAME - PART 7 : 1971

This test groups materials into class 1 to 4 in descending order of performance according to the rate at which flame spreads over their surface under standard heating conditions.

### MAGBOARD FLOOR / CEILING PANEL IS CLASS '0'

Class 'O' is not a classification identified in a British Standard test. Class 'O' is defined in Approved Document B2/3/4 as follows:

a) Composed throughout of materials of limited combustibility, or

b) A Class 1 material which has a fire propagation index (1) of not more than 12, and a sub-index ($i_1$) of not more than 6.

### EUROPEAN CLASSIFICATION

European classification to EN 13501-1: B1 (B-s1 d0), (Bfl-s1 floors)

## ACOUSTIC INSULATION

Magboard floor / ceiling panel has a minimum density of 1300kg per M3 and therefore have superior acoustic performances when used in various elements of construction: walls, floors or ceilings.

With today's environmental considerations, protection against noise is an important criteria in the design of modern construction. Whether used in conventional construction or in component manufacture, Magboard floor / ceiling panel increases substantially the mass of the overall system.

Magboard floor / ceiling panel has been used extensively in a wide range of constructions where acoustic control is one of the important performance criteria.

* Internal linings to existing constructions to increase mass *

* Underlining to roofs in high risk noise areas -airports, etc -both in single sheet and sandwich construction *

* As one or both faces to factory finished bonded composite panels for various cladding systems *

* High performance ceiling and flooring systems *

* External sound barriers for motorways and airports *

* Soundproofing of doors, new or upgrading -application can be to one or both sides *

* Magboard floor / ceiling panel is flat and smooth and can be used in acoustic baffles in theatres, concert halls and recording studios where true sound reverberation is required *

**Magboard floor / ceiling panel acoustic performance based on minimum density of 1300Kg M3 by thickness**

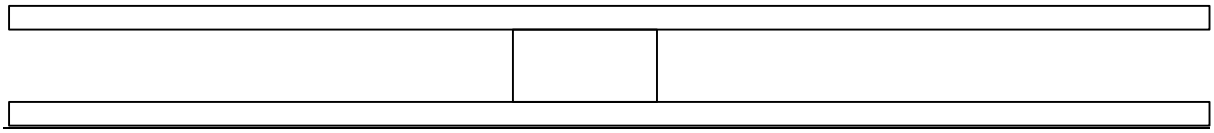
| Thickness | Weight per m2 Kilos | Weighted Acoustic Insulation Value Rw dB |
|---|---|---|
| 8 | 10.4 | 30 |
| 10 | 13 | 31 |
| 12 | 15.6 | 31 |
| 14 | 18.2 | 32 |
| 16 | 20.8 | 33 |
| 18 | 23.4 | 33 |
| 20 | 26 | 34 |
| 22 | 28.6 | 34 |
| 24 | 31.2 | 35 |
| 28 | 36.4 | 36 |
| 30 | 39 | 36 |
| 32 | 41.6 | 37 |
| 36 | 46.8 | 37 |
| 40 | 52 | 38 |

## ACOUSTIC INSULATION

Typical examples using Magboard floor / ceiling panel in varying thicknesses in wall, floor and ceiling constructions. The performance figures given are the theoretical value, it is to be noted that it is possible to achieve these figures providing site work is carried out correctly.

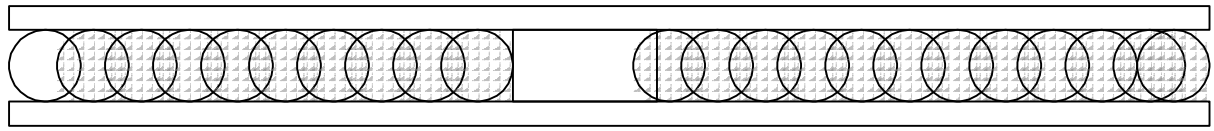
Partition Construction - Basic Details

**Timber Stud - No Insulation To Cavity**



| Thickness of Partition | Thickness of Magboard floor / To Both Sides | Performance (dB) |
|---|---|---|
| 95mm | 10mm | 40 |
| 99mm | 12mm | 43 |
| 107mm | 16mm | 45 |
| 115mm | 10mm | 42 |
| 119mm | 12mm | 45 |

**Timber Stud - Insulation To Cavity**



Insulation RWA 45 - 75mm *RWA 45 - 100mm

| Thickness of Partition | Thickness of Magboard floor / To Both Sides | Performance (dB) |
|---|---|---|
| 95mm | 10mm | 46 |
| 99mm | 12mm | 49 |
| 107mm | 16mm | 53 |
| *115mm | 10mm | 49 |
| *119mm | 12mm | 52 |
| *127mm | 16mm | 55 |

Note: When using steel stud the dB values of the partitions are at least the same and in many cases can be 1 to 2 dB better than timber frame.

## MAGBOARD FLOOR/ CEILING PANEL SYSTEMS

### FACTORY FINISHED HIGH PERFORMANCE FLOORING SYSTEMS

The construction industry now requires as many components as possible to be supplied in a finished form, minimising any further work on site. This particularly applies to the Modular and Volumetric construction industry where modules are of a repetitive sizing for such constructions as:

***Prisons*** ***Hospitals*** ***Restaurants***
***Petrol Stations*** ***Hotels***

Magboard Benelux have developed for this market Magboard floor/ ceiling panel factory finished high performance flooring systems. Magboard floor/ ceiling panel is manufactured using Magboard floor / ceiling panel cement bonded particle board which is a high performance building material having the properties of fire resistance, moisture resistance and high acoustic performance.

**FINISHED SPECIFICATION**

Thickness of floor = 18mm - 20mm - 22mm - 25mm - 28mm – 30mm.

**Magboard floor/ ceiling panel is available to the**

**following specifications: Type 001**

Unsanded Magboard floor/ ceiling panel can be supplied with the standard unsanded finish with square edge or tongue
and groove applied to two or four edges. Care must be taken when using this specification as there will be a thickness tolerance of up to + - 1.5mm.

Note: This range can also be supplied with a factory applied grey primer/sealer to both faces which is highly recommended for environments where the product may take on moisture during a build process or in it's construction life. The top surface is white and the bottom surface is grey.

**Type 002**

Calibrated Magboard floor/ ceiling panel has been factory calibrated and all thickness' have a thickness tolerance of

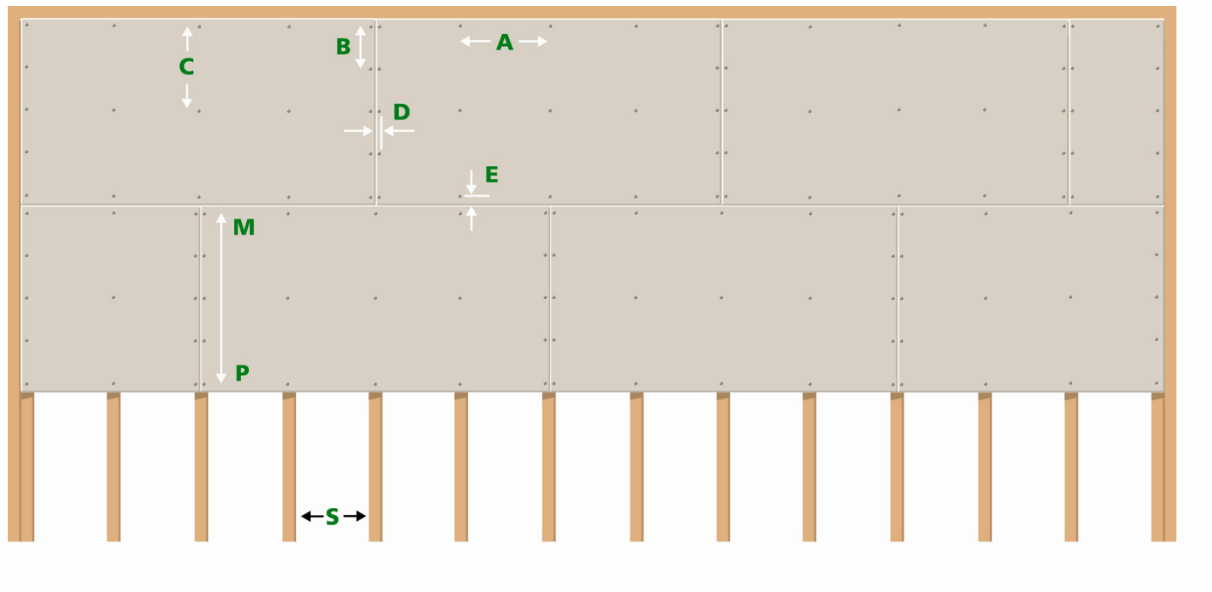
+ - 0.3mm. This range can also be supplied square edge or with tongue and groove applied to two or four edges. This product range is suitable for application of fine thickness overlays such as vinyl flooring and thin carpet tiles.

**Type 003**

Prime/Seal Magboard floor/ ceiling panel that has been factory calibrated and then has a factory applied primer/sealer to reduce uptake of moisture when used in damp or wet conditions, the thickness tolerance is

+ - 0.5mm. The top surface is white and the bottom surface is grey, the application of this primer/sealer can prevent up to 80% of moisture uptake. This range can also be supplied square edge or with tongue and groove applied to two or four edges. This primer/sealer is highly recommended for environments where the product may take on moisture during a build process or in it's construction life. The top surface is white and the bottom surface is grey.

## MAGBOARD FLOOR/ CEILING PANEL SYSTEMS (CONTINUED)LAYING OF SYSTEM - TYPICAL LAYOUT ALSO SHOWING CENTRES OF MECHANICAL FIXINGS




Fixing Centres

S = Support Centres

A = 400 or 600mm dependant on centres of support

B = 300mm

C = 400mm

D = 25mm

E = 50mm

ALL Tongue & Grooved edges to be bonded
ALL Tongue & Grooved or square edges should be bonded with moisture resistant & fire resistant adhesive (see technical specification on adhesives).

Important Note:

A 10mm perimeter gap should be allowed around the edge of the floor to wall junction.
Boards should not be installed with a moisture content over 12% , reading should be taken prior to laying of Magboard floor/ ceiling panel to ensure that this is the case.

Please read these installation instructions in conjunction with BS 8201:2011 Code of practice for installation of flooring of wood and wood based panels.

**The following loading charts have been calculated using the physical data as listed, these are the performance requirements of the BSEN 634 part 2. Magboard floor / ceiling panel's actual performances against BSEN 634 part 2 can be considered as superior.**

## 8mm MAGBOARD BENELUX - MAGBOARD FLOOR / CEILING PANEL

CEMENT PARTICLE BOARD

| Uniformly distributed load (kN/m2) | | | | | | | Concentrated load (kN on 50mm x 50mm square) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Span (mm) | Single Span | | | Continuous | | | Span (mm) | Single Span | | | Continuous | | |
| | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | | | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | |
| | | Span/300 | Span/500 | | Span/300 | Span/500 | | | Span/300 | Span/500 | | Span/300 | Span/500 |
| 300 | 2.0 | 1.8 | 1.1 | 2.6 | - | 2.1 | 300 | 0.1 | - | - | 0.1 | - | - |
| 400 | 1.1 | 0.8 | 0.5 | 1.4 | - | 0.9 | 400 | 0.1 | - | - | 0.1 | - | - |
| 500 | 0.7 | 0.4 | 0.2 | 0.9 | 0.7 | 0.4 | 500 | 0.1 | - | 0.1 | 0.1 | - | - |
| 600 | 0.4 | 0.2 | 0.1 | 0.6 | 0.4 | 0.3 | 600 | 0.1 | - | 0.1 | 0.1 | - | - |
| 700 | 0.3 | 0.1 | 0.1 | 0.4 | 0.3 | 0.2 | 700 | 0.1 | - | 0.05 | 0.1 | - | - |
| 800 | 0.2 | 0.1 | 0.1 | 0.3 | 0.2 | 0.1 | 800 | 0.1 | - | 0.04 | 0.1 | - | - |
| 900 | 0.1 | 0.1 | 0.04 | 0.2 | 0.1 | 0.1 | 900 | 0.1 | - | 0.04 | 0.1 | - | - |
| 1000 | 0.1 | 0.05 | 0.03 | 0.1 | 0.1 | 0.1 | 1000 | 0.1 | 0.1 | 0.03 | 0.1 | - | - |

## 10mm MAGBOARD BENELUX - MAGBOARD FLOOR / CEILING PANEL

CEMENT PARTICLE BOARD

| Uniformly distributed load (kN/m2) | | | | | | | Concentrated load (kN on 50mm x 50mm square) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Span (mm) | Single Span | | | Continuous | | | Span (mm) | Single Span | | | Continuous | | |
| | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | | | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | |
| | | Span/300 | Span/500 | | Span/300 | Span/500 | | | Span/300 | Span/500 | | Span/300 | Span/500 |
| 300 | 3.2 | - | 2.1 | 4.0 | - | 4.0 | 300 | 0.1 | - | - | 0.2 | - | - |
| 400 | 1.8 | 1.5 | 0.9 | 2.2 | - | 1.7 | 400 | 0.1 | - | - | 0.2 | - | - |
| 500 | 1.1 | 0.8 | 0.5 | 1.4 | - | 0.9 | 500 | 0.1 | - | - | 0.2 | - | - |
| 600 | 0.7 | 0.4 | 0.3 | 0.9 | 0.8 | 0.5 | 600 | 0.1 | - | - | 0.2 | - | - |
| 700 | 0.5 | 0.3 | 0.2 | 0.6 | 0.5 | 0.3 | 700 | 0.1 | - | 0.1- | 0.2 | - | - |
| 800 | 0.3 | 0.2 | 0.1 | 0.5 | 0.4 | 0.2 | 800 | 0.1 | - | -0.1 | 0.2 | - | - |
| 900 | 0.2 | 0.1 | 0.1 | 0.3 | 0.2 | 0.1 | 900 | 0.1 | - | -0.1 | 0.1 | - | - |
| 1000 | 0.2 | 0.1 | 0.1 | 0.3 | 0.2 | 0.1 | 1000 | 0.1 | - | -0.1 | 0.1 | - | - |

## 12mm MAGBOARD BENELUX - MAGBOARD FLOOR / CEILING PANEL

CEMENT PARTICLE BOARD

| Uniformly distributed load (kN/m2) | | | | | | | Concentrated load (kN on 50mm x 50mm square) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Span (mm) | Single Span | | | Continuous | | | Span (mm) | Single Span | | | Continuous | | |
| | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | | | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | |
| | | Span/300 | Span/500 | | Span/300 | Span/500 | | | Span/300 | Span/500 | | Span/300 | Span/500 |
| 300 | 4.7 | - | 3.7 | 5.9 | - | - | 300 | 0.2 | - | - | 0.3 | - | - |
| 400 | 2.6 | - | 1.6 | 3.2 | - | 2.9 | 400 | 0.2 | - | - | 0.3 | - | - |
| 500 | 1.6 | 1.3 | 0.8 | 2.0 | - | 1.5 | 500 | 0.2 | - | - | 0.3 | - | - |
| 600 | 1.1 | 0.8 | 0.5 | 1.4 | - | 0.9 | 600 | 0.1 | - | - | 0.1 | - | - |
| 700 | 0.7 | 0.5 | 0.3 | 1.0 | 0.9 | 0.5 | 700 | 0.1 | - | - | 0.2 | - | - |
| 800 | 0.5 | 0.3 | 0.2 | 0.7 | 0.6 | 0.4 | 800 | 0.1 | - | 0.1 | 0.2 | - | - |
| 900 | 0.4 | 0.2 | 0.1 | 0.5 | 0.4 | 0.3 | 900 | 0.1 | - | 0.1 | 0.2 | - | - |
| 1000 | 0.3 | 0.2 | 0.1 | 0.4 | 0.3 | 0.2 | 1000 | 0.1 | - | 0.1 | 0.2 | - | - |

## 14mm MAGBOARD BENELUX - MAGBOARD FLOOR / CEILING PANEL

CEMENT PARTICLE BOARD

| Uniformly distributed load (kN/m2) | | | | | | | Concentrated load (kN on 50mm x 50mm square) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Span (mm) | Single Span | | | Continuous | | | Span (mm) | Single Span | | | Continuous | | |
| | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | | | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | |
| | | Span/300 | Span/500 | | Span/300 | Span/500 | | | Span/300 | Span/500 | | Span/300 | Span/500 |
| 300 | 6.4 | - | 5.9 | 8.0 | - | - | 300 | 0.3 | - | - | 0.4 | - | - |
| 400 | 3.5 | - | 2.5 | 4.4 | - | - | 400 | 0.2 | - | - | 0.4 | - | - |
| 500 | 2.2 | 2.1 | 1.3 | 2.8 | - | 2.4 | 500 | 0.2 | - | - | 0.3 | - | - |
| 600 | 1.5 | 1.2 | 0.7 | 1.9 | - | 1.4 | 600 | 0.2 | - | - | 0.3 | - | - |
| 700 | 1.0 | 0.8 | 0.5 | 1.3 | - | 0.9 | 700 | 0.2 | - | - | 0.3 | - | - |
| 800 | 0.7 | 0.5 | 0.3 | 1.0 | 1.0 | 0.6 | 800 | 0.2 | - | - | 0.3 | - | - |
| 900 | 0.6 | 0.4 | 0.2 | 0.7 | 0.7 | 0.4 | 900 | 0.2 | - | - | 0.3 | - | - |
| 1000 | 0.4 | 0.3 | 0.2 | 0.6 | 0.5 | 0.3 | 1000 | 0.2 | - | 0.2 | 0.3 | - | - |

## 16mm MAGBOARD BENELUX - MAGBOARD FLOOR / CEILING PANEL

CEMENT PARTICLE BOARD

| Uniformly distributed load (kN/m2) | | | | | | | Concentrated load (kN on 50mm x 50mm square) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Span (mm) | Single Span | | | Continuous | | | Span (mm) | Single Span | | | Continuous | | |
| | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | | | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | |
| | | Span/300 | Span/500 | | Span/300 | Span/500 | | | Span/300 | Span/500 | | Span/300 | Span/500 |
| 300 | 8.3 | - | - | 10.5 | - | - | 300 | 0.3 | - | - | 0.5 | - | - |
| 400 | 4.6 | - | 3.7 | 5.8 | - | - | 400 | 0.3 | - | - | 0.5 | - | - |
| 500 | 2.9 | - | 1.9 | 3.6 | - | 3.6 | 500 | 0.3 | - | - | 0.4 | - | - |
| 600 | 1.9 | 1.8 | 1.1 | 2.5 | - | 2.1 | 600 | 0.3 | - | - | 0.4 | - | - |
| 700 | 1.4 | 1.1 | 0.7 | 1.8 | - | 1.3 | 700 | 0.3 | - | - | 0.4 | - | - |
| 800 | 1.0 | 0.8 | 0.5 | 1.3 | - | 0.9 | 800 | 0.2 | - | - | 0.4 | - | - |
| 900 | 0.8 | 0.5 | 0.3 | 1.0 | - | 0.6 | 900 | 0.2 | - | - | 0.4 | - | - |
| 1000 | 0.6 | 0.4 | 0.2 | 0.8 | 0.7 | 0.4 | 1000 | 0.2 | - | - | 0.4 | - | - |

## 18mm MAGBOARD BENELUX - MAGBOARD FLOOR / CEILING PANEL

CEMENT PARTICLE BOARD

| Uniformly distributed load (kN/m2) | | | | | | | Concentrated load (kN on 50mm x 50mm square) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Span (mm) | Single Span | | | Continuous | | | Span (mm) | Single Span | | | Continuous | | |
| | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | | | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | |
| | | Span/300 | Span/500 | | Span/300 | Span/500 | | | Span/300 | Span/500 | | Span/300 | Span/500 |
| 300 | 10.6 | - | - | 13.3 | - | - | 300 | 0.4 | - | - | 0.7 | - | - |
| 400 | 5.9 | - | 5.2 | 7.4 | - | - | 400 | 0.4 | - | - | 0.6 | - | - |
| 500 | 3.7 | - | 2.7 | 4.6 | - | - | 500 | 0.4 | - | - | 0.6 | - | - |
| 600 | 2.5 | - | 1.6 | 3.2 | - | 2.9 | 600 | 0.3 | - | - | 0.5 | - | - |
| 700 | 1.8 | 1.6 | 1.0 | 2.3 | - | 1.9 | 700 | 0.3 | - | - | 0.5 | - | - |
| 800 | 1.3 | 1.1 | 0.7 | 1.7 | - | 1.2 | 800 | 0.3 | - | - | 0.5 | - | - |
| 900 | 1.0 | 0.8 | 0.5 | 1.3 | - | 0.9 | 900 | 0.3 | - | - | 0.5 | - | - |
| 1000 | 0.8 | 0.6 | 0.3 | 1.0 | - | 0.6 | 1000 | 0.3 | - | - | 0.5 | - | - |

## 19mm MAGBOARD BENELUX - MAGBOARD FLOOR / CEILING PANEL

CEMENT PARTICLE BOARD

| Uniformly distributed load (kN/m2) | | | | | | | Concentrated load (kN on 50mm x 50mm square) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Span (mm) | Single Span | | | Continuous | | | Span (mm) | Single Span | | | Continuous | | |
| | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | | | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | |
| | | Span/300 | Span/500 | | Span/300 | Span/500 | | | Span/300 | Span/500 | | Span/300 | Span/500 |
| 300 | 11.8 | - | - | 14.8 | - | - | 300 | 0.5 | - | - | 0.7 | - | - |
| 400 | 6.5 | - | 6.2 | 8.2 | - | - | 400 | 0.4 | - | - | 0.7 | - | - |
| 500 | 4.1 | - | 3.2 | 5.2 | - | - | 500 | 0.4 | - | - | 0.6 | - | - |
| 600 | 2.8 | - | 1.8 | 3.5 | - | 3.5 | 600 | 0.4 | - | - | 0.6 | - | - |
| 700 | 2.0 | 1.9 | 1.2 | 2.5 | - | 2.2 | 700 | 0.4 | - | - | 0.6 | - | - |
| 800 | 1.5 | 1.3 | 0.8 | 1.9 | - | 1.5 | 800 | 0.3 | - | - | 0.6 | - | - |
| 900 | 1.1 | 0.9 | 0.5 | 1.4 | - | 1.0 | 900 | 0.3 | - | - | 0.5 | - | - |
| 1000 | 0.9 | 0.7 | 0.4 | 1.1 | - | 0.7 | 1000 | 0.3 | - | - | 0.5 | - | - |

## 20mm MAGBOARD BENELUX - MAGBOARD FLOOR / CEILING PANEL

CEMENT PARTICLE BOARD

| Uniformly distributed load (kN/m2) | | | | | | | Concentrated load (kN on 50mm x 50mm square) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Span (mm) | Single Span | | | Continuous | | | Span (mm) | Single Span | | | Continuous | | |
| | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | | | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | |
| | | Span/300 | Span/500 | | Span/300 | Span/500 | | | Span/300 | Span/500 | | Span/300 | Span/500 |
| 300 | 13.1 | - | - | 16.4 | - | - | 300 | 0.5 | - | - | 0.8 | - | - |
| 400 | 7.3 | - | 7.2 | 9.1 | - | - | 400 | 0.5 | - | - | 0.8 | - | - |
| 500 | 4.6 | - | 3.7 | 5.8 | - | - | 500 | 0.4 | - | - | 0.7 | - | - |
| 600 | 3.1 | - | 2.1 | 3.9 | - | - | 600 | 0.4 | - | - | 0.7 | - | - |
| 700 | 2.2 | - | 1.3 | 2.8 | - | 2.5 | 700 | 0.4 | - | - | 0.6 | - | - |
| 800 | 1.6 | 1.5 | 0.9 | 2.1 | - | 1.7 | 800 | 0.4 | - | - | 0.6 | - | - |
| 900 | 1.2 | 1.1 | 0.6 | 1.6 | - | 1.2 | 900 | 0.4 | - | - | 0.6 | - | - |
| 1000 | 1.0 | 0.8 | 0.5 | 1.3 | - | 0.9 | 1000 | 0.4 | - | - | 0.6 | - | - |

## 22mm MAGBOARD BENELUX - MAGBOARD FLOOR / CEILING PANEL

CEMENT PARTICLE BOARD

| Uniformly distributed load (kN/m2) | | | | | | | Concentrated load (kN on 50mm x 50mm square) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Span (mm) | Single Span | | | Continuous | | | Span (mm) | Single Span | | | Continuous | | |
| | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | | | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | |
| | | Span/300 | Span/500 | | Span/300 | Span/500 | | | Span/300 | Span/500 | | Span/300 | Span/500 |
| 300 | 15.9 | - | - | 19.9 | - | - | 300 | 0.6 | - | - | 1.0 | - | - |
| 400 | 8.8 | - | - | 11.1 | - | - | 400 | 0.6 | - | - | 0.9 | - | - |
| 500 | 5.5 | - | 4.9 | 7.0 | - | - | 500 | 0.5 | - | - | 0.8 | - | - |
| 600 | 3.8 | - | 2.8 | 4.8 | - | - | 600 | 0.5 | - | - | 0.8 | - | - |
| 700 | 2.7 | - | 1.8 | 3.4 | - | 3.4 | 700 | 0.5 | - | - | 0.8 | - | - |
| 800 | 2.0 | 2.0 | 1.2 | 2.6 | - | 2.3 | 800 | 0.5 | - | - | 0.7 | - | - |
| 900 | 1.5 | 1.4 | 0.8 | 2.0 | - | 1.6 | 900 | 0.4 | - | - | 0.7 | - | - |
| 1000 | 1.2 | 1.0 | 0.6 | 1.5 | - | 1.2 | 1000 | 0.4 | - | - | 0.7 | - | - |

## 24mm MAGBOARD BENELUX - MAGBOARD FLOOR / CEILING PANEL

CEMENT PARTICLE BOARD

| Uniformly distributed load (kN/m2) | | | | | | | Concentrated load (kN on 50mm x 50mm square) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Span (mm) | Single Span | | | Continuous | | | Span (mm) | Single Span | | | Continuous | | |
| | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | | | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | |
| | | Span/300 | Span/500 | | Span/300 | Span/500 | | | Span/300 | Span/500 | | Span/300 | Span/500 |
| 300 | 18.9 | - | - | 23.7 | - | - | 300 | 0.7 | - | - | 1.2 | - | - |
| 400 | 10.5 | - | - | 13.2 | - | - | 400 | 0.7 | - | - | 1.1 | - | - |
| 500 | 6.6 | - | 6.4 | 8.3 | - | - | 500 | 0.6 | - | - | 1.0 | - | - |
| 600 | 4.5 | - | 3.7 | 5.7 | - | - | 600 | 0.6 | - | - | 1.0 | - | - |
| 700 | 3.2 | | 2.3 | 4.1 | - | - | 700 | 0.6 | - | - | 0.9 | - | - |
| 800 | 2.4 | - | 1.6 | 3.1 | - | 2.9 | 800 | 0.6 | - | - | 0.9 | - | - |
| 900 | 1.8 | 1.8 | 1.1 | 2.4 | - | 2.1 | 900 | 0.5 | - | - | 0.9 | - | - |
| 1000 | 1.4 | 1.3 | 0.8 | 1.9 | - | 1.5 | 1000 | 0.5 | - | - | 0.8 | - | - |

## 25mm MAGBOARD BENELUX - MAGBOARD FLOOR / CEILING PANEL

CEMENT PARTICLE BOARD

| Uniformly distributed load (kN/m2) | | | | | | | Concentrated load (kN on 50mm x 50mm square) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Span (mm) | Single Span | | | Continuous | | | Span (mm) | Single Span | | | Continuous | | |
| | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | | | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | |
| | | Span/300 | Span/500 | | Span/300 | Span/500 | | | Span/300 | Span/500 | | Span/300 | Span/500 |
| 300 | 20.5 | - | - | 25.7 | - | - | 300 | 0.8 | - | - | 1.3 | - | - |
| 400 | 11.4 | - | - | 14.3 | - | - | 400 | 0.7 | - | - | 1.2 | - | - |
| 500 | 7.2 | - | - | 9.1 | - | - | 500 | 0.7 | - | - | 1.1 | - | - |
| 600 | 4.9 | - | 4.2 | 6.2 | - | - | 600 | 0.6 | - | - | 1.0 | - | - |
| 700 | 3.5 | - | 2.6 | 4.5 | - | - | 700 | 0.6 | - | - | 1.0 | - | - |
| 800 | 2.6 | - | 1.8 | 3.4 | - | 3.3 | 800 | 0.6 | - | - | 1.0 | - | - |
| 900 | 2.0 | - | 1.2 | 2.6 | - | 2.3 | 900 | 0.6 | - | - | 0.9 | - | - |
| 1000 | 1.6 | 1.5 | 0.9 | 2.0 | - | 1.7 | 1000 | 0.6 | - | - | 0.9 | - | - |

## 28mm MAGBOARD BENELUX - MAGBOARD FLOOR / CEILING PANEL

CEMENT PARTICLE BOARD

| Uniformly distributed load (kN/m2) | | | | | | | Concentrated load (kN on 50mm x 50mm square) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Span (mm) | Single Span | | | Continuous | | | Span (mm) | Single Span | | | Continuous | | |
| | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | | | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | |
| | | Span/300 | Span/500 | | Span/300 | Span/500 | | | Span/300 | Span/500 | | Span/300 | Span/500 |
| 300 | 25.8 | - | - | 32.3 | - | - | 300 | 1.0 | - | - | 1.6 | - | - |
| 400 | 14.4 | - | - | 18.0 | - | - | 400 | 0.9 | - | - | 1.5 | - | - |
| 500 | 9.1 | - | - | 11.4 | - | - | 500 | 0.9 | - | - | 1.4 | - | - |
| 600 | 6.2 | - | 5.9 | 7.8 | - | - | 600 | 0.8 | - | - | 1.3 | - | - |
| 700 | 4.5 | - | 3.7 | 5.7 | - | - | 700 | 0.8 | - | - | 1.2 | - | - |
| 800 | 3.3 | - | 2.5 | 4.3 | - | - | 800 | 0.8 | - | - | 1.2 | - | - |
| 900 | 2.6 | - | 1.7 | 3.3 | - | 3.3 | 900 | 0.7 | - | - | 1.2 | - | - |
| 1000 | 2.0 | - | 1.3 | 2.6 | - | 2.4 | 1000 | 0.7 | - | - | 1.1 | - | - |

## 32mm MAGBOARD BENELUX - MAGBOARD FLOOR / CEILING PANEL

CEMENT PARTICLE BOARD

| Uniformly distributed load (kN/m2) | | | | | | | Concentrated load (kN on 50mm x 50mm square) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Span (mm) | Single Span | | | Continuous | | | Span (mm) | Single Span | | | Continuous | | |
| | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | | | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | |
| | | Span/300 | Span/500 | | Span/300 | Span/500 | | | Span/300 | Span/500 | | Span/300 | Span/500 |
| 300 | 33.7 | - | - | 38.4 | - | - | 300 | 1.3 | - | - | 2.1 | - | - |
| 400 | 18.8 | - | - | 23.6 | - | - | 400 | 1.2 | - | - | 1.9 | - | - |
| 500 | 11.9 | - | - | 15.0 | - | - | 500 | 1.1 | - | - | 1.8 | - | - |
| 600 | 8.1 | - | - | 10.3 | - | - | 600 | 1.1 | - | - | 1.7 | - | - |
| 700 | 5.9 | - | 5.5 | 7.4 | - | - | 700 | 1.0 | - | - | 1.6 | - | - |
| 800 | 4.4 | - | 3.7 | 5.6 | - | - | 800 | 1.0 | - | - | 1.6 | - | - |
| 900 | 3.4 | - | 2.6 | 4.3 | - | - | 900 | 1.0 | - | - | 1.5 | - | - |
| 1000 | 2.7 | - | 1.9 | 3.4 | - | - | 1000 | 0.9 | - | - | 1.5 | - | - |

## 36mm MAGBOARD BENELUX - MAGBOARD FLOOR / CEILING PANEL

CEMENT PARTICLE BOARD

| Uniformly distributed load (kN/m2) | | | | | | | Concentrated load (kN on 50mm x 50mm square) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Span (mm) | Single Span | | | Continuous | | | Span (mm) | Single Span | | | Continuous | | |
| | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | | | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | |
| | | Span/300 | Span/500 | | Span/300 | Span/500 | | | Span/300 | Span/500 | | Span/300 | Span/5-00 |
| 300 | 42.8 | - | - | 43.2 | - | - | 300 | 1.7 | - | - | 2.7 | - | - |
| 400 | 23.9 | - | - | 29.9 | - | - | 400 | 1.5 | - | - | 2.4 | - | - |
| 500 | 15.1 | - | - | 19.0 | - | - | 500 | 1.4 | - | - | 2.3 | - | - |
| 600 | 10.4 | - | - | 13.1 | - | - | 600 | 1.3 | - | - | 2.2 | - | - |
| 700 | 7.5 | - | - | 9.5 | - | - | 700 | 1.3 | - | - | 2.1 | - | - |
| 800 | 5.6 | - | 5.2 | 7.2 | - | - | 800 | 1.2 | - | - | 2.0 | - | - |
| 900 | 4.4 | - | 3.7 | 5.6 | - | - | 900 | 1.2 | - | - | 1.9 | - | - |
| 1000 | 3.4 | - | 2.7 | 4.4 | - | - | 1000 | 1.2 | - | - | 1.9 | - | - |

## 40mm MAGBOARD BENELUX - MAGBOARD FLOOR / CEILING PANEL

CEMENT PARTICLE BOARD

| Uniformly distributed load (kN/m2) | | | | | | | Concentrated load (kN on 50mm x 50mm square) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Span (mm) | Single Span | | | Continuous | | | Span (mm) | Single Span | | | Continuous | | |
| | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | | | Load limited by stress | Load limited by deflection | | Load limited by stress | Load limited by deflection | |
| | | Span/300 | Span/500 | | Span/300 | Span/500 | | | Span/300 | Span/500 | | Span/300 | Span/500 |
| 300 | 52.8 | - | - | 48.0 | - | - | 300 | 2.1 | - | - | 3.3 | - | - |
| 400 | 29.5 | - | - | 36.0 | - | - | 400 | 1.9 | - | - | 3.0 | - | - |
| 500 | 18.7 | - | - | 23.5 | - | - | 500 | 1.8 | - | - | 2.8 | - | - |
| 600 | 12.8 | - | - | 16.2 | - | - | 600 | 1.7 | - | - | 2.7 | - | - |
| 700 | 9.3 | - | - | 11.8 | - | - | 700 | 1.6 | - | - | 2.5 | - | - |
| 800 | 7.0 | - | - | 8.9 | - | - | 800 | 1.5 | - | - | 2.5 | - | - |
| 900 | 5.4 | - | 5.1 | 6.9 | - | - | 900 | 1.5 | - | - | 2.4 | - | - |
| 1000 | 4.3 | - | 3.7 | 5.5 | - | - | 1000 | 1.4 | - | - | 2.3 | - | - |

# MAGBOARD FLOOR / CEILING PANEL

Although Magboard floor / ceiling panel has not generally been regarded as a ceiling material many prestigious contracts have been carried out using this material for a variety of different reasons, combining the properties of Magboard floor / ceiling panel to provide a high performance ceiling construction.

***Class '0' fire resistance*  *Moisture resistance***
***Easily machined to produce profiles***
***Can be used in grid or demountable system***
*** Acoustic performance ***
***Wide range of surface finishes***
***Flexibility in design ***

**Moulded Panels**

Magboard floor / ceiling panel can be machined to create a fielded effect or have mouldings in hard or soft wood applied to the surface.

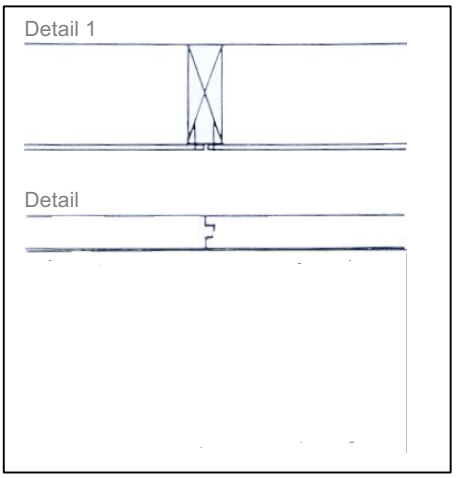
**Ceiling Grid**

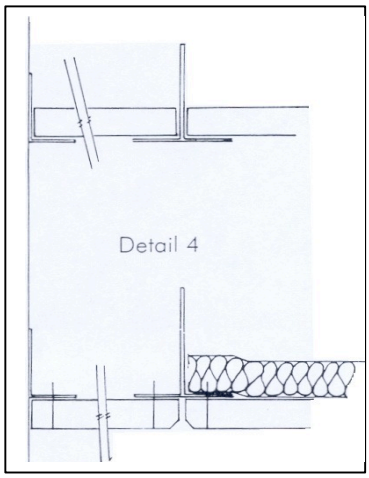
Magboard floor / ceiling panel can be supplied cut to size, bevel or square edged, and with a variety of surface treatments. Form emulsion, veneered, laminated etc.

**Specific High Performance Systems**

Magboard floor / ceiling panel ceiling systems are used where there is a requirement for a high performance against any of the following criteria: Fire-moisture/Humidity/-Acoustics-impact contamination. Magboard floor / ceiling panel is also available in standard sizes of 600 x 600mm or 1200 x 600mm. Available with square edge (for lay-in grid system) or bevelled edge (for face fixing) they offer a class '0' fire resistance with a class '1'
spread of flame to BS 476 part 7: European classification to EN 13501-1: B1 (B-s1 d0 excluding floors), (Bfl-s1 floors). The density of Magboard floor / ceiling panel offers excellent airborne sound reduction (31 dB for a single tile of 10mm). The tiles can be supplied pre-decorated or with an ex-works smooth finish suitable for all
types of site applied coatings. Being manufactured from Magboard floor / ceiling panel they are totally asbestos and toxic free, with the additional qualities of long term durability and maintenance free performance.

Typical Application Details



# SURFACE TREATMENTS TO MAGBOARD FLOOR / CEILING PANEL

**Decoration to Magboard floor / ceiling panel**

Magboard floor / ceiling panel will receive most standard paint finishes and stains. Magboard floor / ceiling panel has a pH of 11-13 and therefore an alkali resistant primer may be required by some coatings - it is advisable to refer to the paint manufacturer in all instances. Remove any surface dust prior to decoration and ensure that if boards have been exposed to the elements that they have been allowed to dry out and acclimatise before being coated.

For surface treatments that are not vapour or moisture permeable, the reverse and all edges of the panel should also be treated in the same way. Uneven joints, screw holes or surface damage can be rectified by use of compatible filler.

**Factory applied Primer/Sealer to Magboard floor / ceiling panel**

Magboard floor / ceiling panel can be supplied with a factory applied primer/sealer that will resist up to 80% of possible moisture uptake. It can be applied to both unsanded and sanded material, compatibility of this finish to additional surface treatments should be referred to the finish-coating manufacturer before any application. This finish is standard for the MAGBOARD FLOOR/ CEILING PANEL range of flooring and is essential when used in conjunction with ceramic tile installations.

**Primer/Sealer Specification**

Composition – Acrylic based water reducible coating containing white or grey pigment and fillers. Application - Suitable for in line application to MAGBOARD FLOOR / CEILING PANEL cement board, both faces and all edges. It is applied by computer controlled pressure spray guns.
Properties - The cured film of the primer/sealer has excellent adhesion to the substrate and reduces the swelling and shrinkage of the panel by controlling any moisture uptake.

Extensive test have been carried out with various adhesive manufacturers but in all instances surface compatibility should be carried before any further application is made by either adhesive or paint.

Appearance - Opaque white or grey

Viscosity - 30 – 35 sec. Din 4mm

cup Density - ca 1.33

Drying - After coating panels run through an extractor zone so that moisture is taken form the application to aid curing and level the surface. Panels then pass under infrared dry zones to harden the surface.

Storage - Product should always be stored away from direct sunlight and direct heat sources at temperatures preferably below 25℃.