

X-Ray Protection

12.5 mm Board

Gyproc X-Ray Protection board is a mineral board composed primarily of coarse grade barium sulphate with gypsum and chopped glass fibre strands also with other special additives in the core that is encased in, and firmly bonded to, strong paper liners.

Performance



Fire Resistant



Acoustic Insulation



Stability



Productivity Gain



Environmentally
Friendly





Usage

This new interior innovation is fast to install and is fully recyclable as the board is based on a barium sulphate, an effective x-ray protection material, very similar in environmental credentials to gypsum.

Product Performance

A Mineral board composed primarily of coarse grade barium sulphate with gypsum and chopped glass fibre strands also with other special additives in the core that is encased in, and firmly bonded to, strong paper liners.

Application fields:

A special board that can be used for internal linings in buildings to provide X-Ray protection as an alternative to using lead sheets. Suitable for rooms with X-Ray equipment in medical centres, hospitals also veterinary and dental surgeries.

Advantages:

- Lead-free composition.
- Easy and fast installation.
- Flexibility of construction, adaptable to most types of X-ray protection areas of projects.
- Provides additional sound insulation performance.
- Good fire protection performance.

Technical Data:

- Face liner: Ivory
- Back liner: Brown
- Core colour: Yellow
- Long edge profile: Tapered edges (TE)
- Short edge profile: Square edges (SE)
- Thermal conductivity: 0,25 W / mK
- Water vapour resistance (μ): 10 (EN 12524)
- Reaction to fire (EN 13501-1): A2 - s1 - d0
- Width: 600 mm
- Classification according to standard: EN 520 types I,D and F

Standards:

- EN 520.
- CE marked in accordance with EN 520 2004, A1:2009.

Board Range

Width (mm)	Length (mm)	Edge Type	Mass (Kg/m ²)
12.5	2 400	Taper Edge	19.50

X-Ray Protection

X-Ray Protection board has been independently tested to an International Standard and certified by the Radiation Metrology Group of Public Health England for lead-equivalence performance in accordance with IEC 61331-1:2014. The lead-equivalence performance of a single board are given below:

X-Ray machine power output (kV)	60	70	80	90	100	125	150
Lead equivalence thickness (mm)	0.46	0.63	0.75	0.76	0.71	0.54	0.45

Fire Resistance / Sound Insulation

X-Ray Protection board linings also provide good fire protection owing to the unique behaviour of the non-combustible mineral core when subjected to high temperatures. The inclusion of glass fibre and other additives in the core improves its fire protective properties when compared to regular plasterboard.

The high density mineral core also increases the sound insulation performance compared to regular plasterboard. Please refer to the Technical brochure for X-Ray Protection for information on the fire resistance and sound insulation performance of partitions lined with X-Ray Protection.

General

It is important to observe appropriate health and safety legislation when working on site i.e. personal protective clothing and equipment, etc. The following notes are intended as general guidance only. In practice, consideration must be given to design criteria requiring specific project solutions.

Handling

Pallets of boards should be handled using fork-lift trucks, ensuring that the position of the forks is appropriate and that the personnel know the procedure and are wearing suitable safety clothing. Boards should be carefully lifted from the stack at an appropriate height, turned and carried on edge. It is recommended to handle individual boards avoiding a horizontal position.

Storage

Boards should be stored on a firm, level surface and protected from dampness and the weather.

Protection

The boards are supplied shrink wrapped. In the warehouse and onsite, it is advisable to keep the boards covered for as long as possible.

Stacking

Packs of boards should be stacked no greater than 4 lifts high from the ground for safe handling on-site. This can be increased to 8 lifts in warehousing, providing the floor loading is checked as being adequate.

Cutting

This product may be cut using a plasterboard saw or by scoring with a sharp knife and snapping the board over a straight edge. When cutting boards, power and hand tools should be used with care and in accordance with the manufacturers' recommendations. Power tools should only be used by people who have been instructed and trained to use them safely. Appropriate personal protective equipment should always be used.

Fixing

Boards are fixed horizontally with the decorative side out to metal framing positioned at no greater than 600mm centres. Inner layer board are fixed on the perimeter only to metal framing using HD board type drywall screw at 600 mm centres. The outer layer board is fixed to all metal framing at 300 mm centre, reducing to 200 mm centres at the perimeter of boarder areas and at external corners.

Board joints are staggered between layers and each side of the partition by at least one stud spacing and vertically by half a board width. Lightly butt boards together. Never force boards into position. Locate boards to the centre line of framing where this supports board edges or ends. Install fixings not closer than 13mm from cut edges and 10mm from bound edges. Position cut edges to internal angles whenever possible, removing paper burrs with fine sandpaper.

Jointing

All outer layer joints between boards, also at perimeters and at abutments with other construction elements should be taped and filled using ProMix X-Ray Protection jointing compound. In multi-layer systems, inner layer board joints should be filled to the surface of the tapered edges after drying before the outer layer board is installed. All screw heads and any gaps or surface defects in each board layer are filled with ProMix X-Ray Protection jointing compound to complete the integrity of the X-ray shielding performance.

Decoration and surface maintenance

The surface of X-Ray Protection is similar to regular plasterboards and therefore is suitable for most forms of decoration. After the joint treatment has dried, decoration, including any decorator's preparatory work, should follow with the minimum delay.

In high traffic areas, where damage to the X-Ray Protection lining could be encountered and may compromise the designed levels of X-ray protection, consideration should be given to adding an extra layer of high durability plasterboard such as Gyproc Habito fixed vertically.



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