Frequently Asked Questions for GoldenEdge® MDF Panelbrace™ Wall Bracing Systems

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1. What are GoldenEdge® MDF Panelbrace™ Wall Bracing Systems?

GoldenEdge® MDF Panelbrace Wall Bracing Systems are a range of wall bracing systems based on 9mm and 12mm GoldenEdge® Regular Density MDF used to resist earthquake and wind loads on timber frame buildings designed and constructed in accordance with NZS 3604: 2011. Certified by BRANZ appraisal 799.

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2. Can I use GoldenEdge® Regular 9mm or 12mm rather than product labeled Panelbrace™?

Yes, both 9mm and 12mm GoldenEdge® Regular Density MDF are approved for use as a bracing element. MDF Panelbrace is 9mm or 12mm Regular Density MDF cut to 1200mm X 2400mm which is a convenient size to use on standard framing spacing's without extra cutting.

Do not use GoldenEdge® Liteboard, or other thicknesses of GoldenEdge® MDF as these have not been through BRANZ appraisal process.

Do not use MDF made by other manufacturers as a bracing element unless they have their own independent appraisal that meets the requirements of the New Zealand Building Code (NZS 3604-2011.

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3. What are the sheet fixing instructions?

For full instructions on Panel hold-downs and fixing refer to our brochure at:

GoldenEdge® MDF Panelbrace™ Wall Bracing Systems Brochure

For the full BRANZ Appraisal 779, refer to the following document:

BRANZ Appraisal for GoldenEdge® MDF Panelbrace™ Wall Bracing Systems

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4. Can Panelbrace™ Wall Bracing Systems be used for wall heights more than 2.4m?

Yes, they can.

The fixing instructions for GoldenEdge® MDF Panelbrace™ Wall Bracing Systems in relation to walls higher than 2.4m. are as follows:

GoldenEdge® Regular 9mm or 12mm MDF sheets are fixed vertically. Adjoining sheets require an approximate 2 mm gap between them to allow for movement. Full sheets must be used wherever possible. Bracing panels must be fixed from top plate to bottom plate.

For wall heights over 2.4m, a full sheet can be used if they extend to the full height (e.g. 2.7m x 1.2m). Alternatively, a part sheet can be stacked above a full sheet, butt joined on a single row of nogs with each sheet/part sheet independently nailed off as per the nail spacing in the Panelbrace™ specifications. (e.g. 2.4m x 1.2m sheet with a 0.3m x 1.2m part sheet above it to give a 2.7m x 1.2m bracing element)

Fixings must be no closer than 10mm from the sheet edge and no closer than 18mm from the top and bottom edges of the sheet. Fixings are driven at right angles to the sheet until the head is flush with the sheet surface, for nail fixings, or countersunk approximately 0.5mm for screw fixings. Fixings must not be over-driven.

GoldenEdge® Regular MDF sheets are fixed at 150mm centres around the perimeter of the sheets and at 300mm centres to intermediate studs. Fixing to dwangs/noggings is not required.

For wall heights greater than 2.4m, the bracing rating is calculated by multiplying the appropriate value shown in Table 1*, in our brochure, by a factor f=2.4/H where H is the wall height in metres. Walls lower than 2.4m shall be rated as if they were 2.4m high.

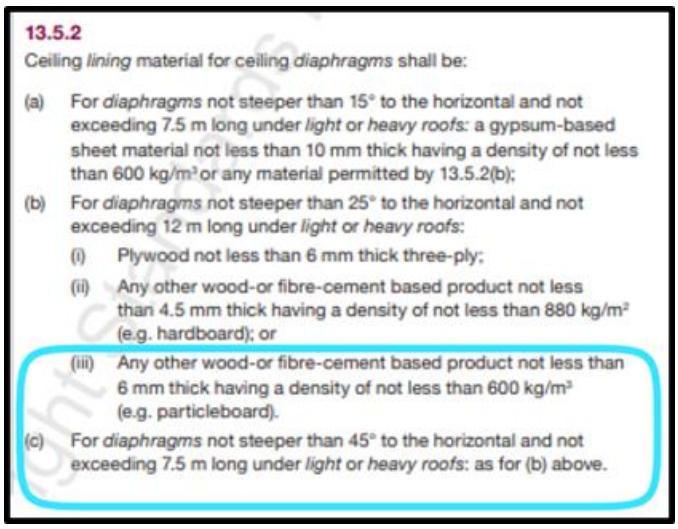
These instructions have been reviewed and approved by Branz, who undertook the bracing system appraisal.

5. Can I use glue and brads or staples to attach the panels?

This method of attachment has not been through the appraisal process so cannot be used if the panels are required to provide bracing to meet the building bracing unit requirements. If the panels are just being used as a wall lining this is a suitable method of attachment.

6. Can I use GoldenEdge® MDF for Ceilings?

GoldenEdge® MDF can be used for Diaphragm Ceilings based on NZS 3604. See the relevant sections; (b)(iii) and (c) below.



13.5.2

Ceiling *lining* material for ceiling *diaphragms* shall be:

(a) For *diaphragms* not steeper than 15° to the horizontal and not exceeding 7.5 m long under *light* or *heavy roofs*: a gypsum-based sheet material not less than 10 mm thick having a density of not less than 600 kg/m³ or any material permitted by 13.5.2(b);

(b) For *diaphragms* not steeper than 25° to the horizontal and not exceeding 12 m long under *light* or *heavy roofs*:

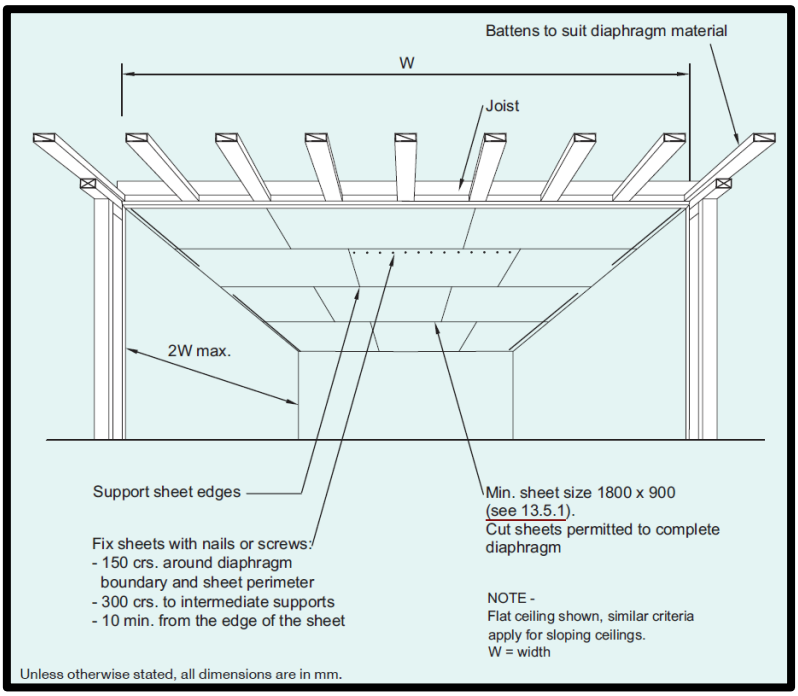
(i) Plywood not less than 6 mm thick three-ply;

(ii) Any other wood-or fibre-cement based product not less than 4.5 mm thick having a density of not less than 880 kg/m³ (e.g. hardboard); or

(iii) Any other wood-or fibre-cement based product not less than 6 mm thick having a density of not less than 600 kg/m³ (e.g. particleboard).

(c) For *diaphragms* not steeper than 45° to the horizontal and not exceeding 7.5 m long under *light* or *heavy roofs*: as for (b) above.

To ensure compliance you would need to use GoldenEdge® Regular Density MDF. This will have a minimum density of 690kg/m^3. The standard allows down to 6mm thick. We would recommend 9mm to prevent any sag.



As indicated above the standard outlines the fixing spacing requirements.
Adjoining sheets require an approximate 2mm gap between them to allow for movement
Fixings are driven at right angles to the sheet until the head is flush with the sheet surface, for nail fixings, or countersunk approximately 0.5mm for screw fixings. Fixings must not be over-driven.

Our recommended sheet fasteners are:

• 40 x 2.8mm hot-dipped galvanised fibre cement nails or 8g x 40mm, gold-passivated countersunk, coarse-thread woodscrew

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7. What is the fire rating for Panelbrace™?

The New Zealand fire performance group rating for painted Regular Density MDF is group 3.
In December 2013, a new table – C/VM2 Appendix A1.5 Table A1 (see Figure 2) – was introduced, providing predetermined Group Numbers for paint and coating finishes applied to some common wall and ceiling substrate products. As a result, many systems will not require testing to determine the Group Number for compliance.

Table A1 Specified performances for some substrate and coating combinations

Coating (coating in good condition and well adhered to substrate)	Substrate	Performance (with or without coating)
Waterborne or solvent borne paint coatings ≤ 0.4 mm thick Polymeric films ≤ 0.2 mm thick	Concrete and masonry ≥ 15 mm thick Sheet metal ≥ 0.4 mm thick, or Fibre-cement board ≥ 6.0 mm thick Glass	G1-S
Waterborne or solvent borne paint coatings ≤ 0.4 mm thick	Gypsum plasterboard with or without paper facing ≥ 9.5 mm thick ≥ 400 kg/m^3 core density < 5% wt organic contribution to board	G2-S
Waterborne or solvent borne paint coatings, varnish or stain ≤ 0.4 mm thick ≤ 100 g/m^2	Solid wood or wood product ≥ 9.0 mm thick ≥ 600 kg/m^3 for particle boards, or ≥ 400 kg/m^3 for all other wood and wood products	G3

Note: The requirements of this table do not apply to metal faced panels with polymeric substrate.