

Fixing, Finishing and Storage

Machining

GoldenEdge MDF Panels can be worked easily with standard wood working machinery. The homogenous nature of GoldenEdge ensures that a good finish can be achieved on the edges.

Tungsten carbide cutters and saws are recommended.

Laminating

Because of its light colour GoldenEdge MDF is an ideal substrate for laminating with natural wood veneer, vinyls, printed papers, foils and melamine papers.

A balanced laminated panel would eliminate minor cupping or bowing.

Care must be taken to ensure that conditions of very high press pressure, high press temperature and long press times do not exist during laminating.

Screw Holding

GoldenEdge MDF provides good screw holding strength both in the faces and edges.

The recommendations are:

Screw Type

The best results are obtained with the parallel thread screws such as the Twinfast or particle board screws.

Conventional wood screws are not recommended.

Screw Gauge

The choice of screw gauge should be decided in relation to board thickness. The maximum screw gauge when edge fixing into GoldenEdge MDF is:

Board Thickness	Maximum Screw Gauge
9	5
12	6
15	7
16	7
18	8
25	9

Pilot Hole

A pilot hole is recommended to avoid splitting during edge screw fixing.

Screw Gauge	Recommended Pilot Hole	
	Liteboard	Regular
4	1.5mm	2.0mm
5	1.8mm	2.4mm
6	2.0mm	2.6mm
7	2.2mm	2.7mm
8	2.5mm	3.0mm
9	2.8mm	3.3mm

Pilot Hole Depth

Pilot holes should be drilled approximately 2-3 mm beyond the expected depth of insertions of the screws.

Screw Position

The position of screws inserted into the faces and edges of MDF should be decided in relation to board thickness and screw size. Screws inserted into the edges should be not less than 25mm from the corners.

Screw Tension

The screw must not be overtightened as further turning will reduce the holding strength.

Screw Withdrawal Strengths

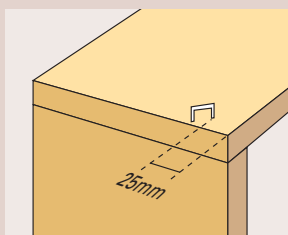
To illustrate the holding power of screws in GoldenEdge MDF the forces required to withdraw typical parallel thread screws in an axial direction from 16mm GoldenEdge MDF faces and edges are given below.

Screw Gauge	Depth of Insertion (mm)		Withdrawal Strength (N)	
	Face	Edge	Face	Edge
5	12	12	580	360
	16	20	1080	640
6	12	12	640	390
	16	20	1140	960
8	12	12	750	470
	16	20	1330	1060

Stapling

Staples can be used effectively for joint fitting. For best results it is helpful to add adhesive to the joint prior to assembly.

When stapling into GoldenEdge MDF, it is important to have good control of air pressure to avoid excessive penetration of staples. For nailing use either annular groove or helical nails of 13 or 14 gauge, for best results.



MDF	Staple
9mm	20mm
12mm	20-25mm
15mm	30mm
16mm	32mm
18mm	36mm

Do not staple within 25mm of edge of board. Offset staple to edge of board.

Nailing Schedule

Fixing Centres (mm)	150 Edge 200 Intermediate
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Sheet Edge Clearance (mm) 2

(Note all nails either non-ferrous or plated)



The mark of responsible forestry



Nailing

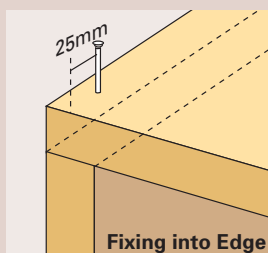
GoldenEdge MDF can be fixed by nailing with good holding power and no split out when the following conditions are met:

1. Types of Nails

Use either annular grooved or helical (spiral) nails.

2. Nail Sizes

Use only 13 or 14 gauge nails. These give best results with good holding power in 16mm and 18mm GoldenEdge MDF. The length of nail should not exceed 50mm.



Nailing is not recommended for 9mm and 12mm GoldenEdge MDF.

3. Distance from the Corner

Nails must be at least 25mm from the corner of the MDF panel.

4. Nailing at a slight angle will further increase the holding power.

5. Nailing is not recommended to the edges of 9mm and 12mm MDF (screwing is recommended).

6. Air gun pressure should be adjusted to ensure that the nail head finishes level with the surface of the panel.

Sanding and Finishing

Special attention to sanding edges gives excellent results. Use 120 grit paper followed by 240 or 320 grit paper.

Stopping

Stop all nail and staple holes with a low shrinkage wood filler. Match and blend colours as required to suit. Lightly sand with 320 grit paper.

Painting

For best results application of three coats is recommended. First coat Primer/undercoat is critical to the final finish. It is recommended that primer/undercoat is applied to paint manufacturer's recommendations.

Apply second and third coats or additional coats as required. A light sand using 280 to 320 grit paper is recommended after the first coat and between subsequent coats.

Working with GoldenEdge

To achieve a smooth continuous surface without warping or distortion, GoldenEdge should never be fixed to timber framing or substrates with a moisture content exceeding 20%.

Finishing

Veneers and Plastic Sheeting Surfacing:

Satisfactory adhesion by cold cured adhesives rely on keying of the surface of GoldenEdge by light sanding. It is essential that a balancing of surfacing be provided on both surfaces to avoid board distortion.

Veneering of GoldenEdge on one surface alters the balance of the material to absorb moisture, therefore the risk of board distortion is high. This practice is not advisable.



Photo courtesy Kitchen Studio



Fixing, Finishing and Storage

Lining Walls (6mm minimum recommended)

Because of the susceptibility of GoldenEdge MDF to expansion and contraction all joints between sheets should provide for movement. Therefore a 2mm expansion gap must be provided for.

Treatment of the joint can vary - vee joint, rounded joint, timber half round, PVC jointers.

GoldenEdge MDF must be supported by framework and nailed at specific points please refer to table.

Framework Support Centres

Panel Thickness (mm)	WALL LINING		CEILING LINING	
	Stud Centres (mm)	Nogging Centres (mm)	Joist/Truss Centres (mm)	Nogging Centres (mm)
6.0, 9.0, 12.0	400	1200	450	800
	450	1200	600	600
	600	800	900	480
			1200	480

Lining Masonry Walls (6mm minimum recommended)

Because of the GoldenEdge susceptibility to water vapour, masonry walls must be sealed from external moisture ingress. The following procedures must be adhered to.

Step 1 Application of an effective damp proof course (eg. Flintkote) to the exterior of backfilled basement floors.

Step 2 A moisture barrier must be applied (ie. paint film) to the interior of basement walls. Furring strips are then overlaid, (50 x 25mm) the spacing of which is given in Framework Support Centres table. 25mm end gaps should be left around the furring strips to encourage air movement.

Step 3 A reflective insulation foil should then be applied to the face immediately before the application of the GoldenEdge board, then fixed in the manner described for timber frame lining. Consideration should be given to the insertion of small ventilation holes at the bottom of each sheet, finished with facing plates.

The non-compliance with any or all of the previous steps will encourage sheet movement and therefore cause the lining to buckle.

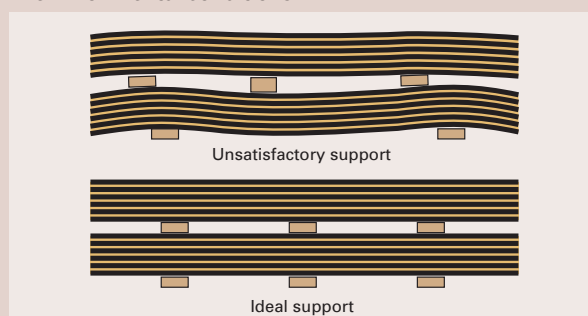
Modern developments in construction adhesives have made them extremely effective and useful in fixing sheet materials as an alternative to mechanical fixing by nails or staples. Construction adhesives and GoldenEdge are compatible, being ideal for lining interiors. It is recommended that solvent based elastomeric construction adhesives be used preferably of the 'slow cure' variety. Water based varieties are not recommended. Manufacturers' recommendations with reference to method and degree of application must be followed closely.

Storage

The method of manufacturing MDF ensures a balanced construction resulting from the uniform distribution of fibres throughout the thickness of the board. The maintenance of this inherent flatness is dependent upon the use of correct storage and handling procedures. Without these, boards may develop a permanent set under their own weight particularly if they are not adequately supported on a flat pallet or by sufficient bearers during any storage period.

The following procedures are recommended:

1. MDF sheets should preferably be stored horizontally and lifted clear of the floor using dry bearers as supports.
2. Where individual bearers are used they should be of equal thickness and placed at not more than 800mm centres for boards of 15mm thickness or more. Closer spacing is required for thinner boards.
3. The bearers supporting successive layers should be in vertical alignment.
4. Stacks of boards should have flush sides to minimise damage to protruding edges or overhanging corners.
5. Vertical storage of small numbers of boards is acceptable provided the boards are well supported close to vertical position.
6. The storage area should be well ventilated and the conditions should be reasonably dry. An average relative humidity of 50% will maintain board moisture content in the range 7-9%.
7. Boards should be fully protected from the weather during transportation and storage.
8. One or two scrap boards should be placed on top of stacked boards, to reduce the effect of short term changes in environmental conditions.



Taking Delivery

GoldenEdge is delivered with cover sheets included at top and bottom. These packs are plastic strapped and should be dismantled and conditioned on bearers as soon as possible. Care should be taken when cutting strapping.

Conditioning

To ensure the compatibility of GoldenEdge with other materials with which it is being used, a conditioning period of at least 48 hours must be observed. To promote air movement around the individual sheets, 75mm gluts must be inserted between the sheets. It is essential that each sheet is supported not more than 900mm centres and 300mm from the end. If the stack must be covered a 'breather' type sheeting with a clear air space must be provided between the stack and the cover sheet; impervious materials such as polyethylene sheet must be avoided.

Product Care

Care in stock turn is essential to avoid board variations caused by moisture uptake. Therefore the principle of first in first out stock rotation should be used. Storage should always be in areas not subject to:

1. High humidity
2. Water infiltration
3. Abnormal temperature variation
4. Direct sunlight
5. Spillage of liquids such as coffee or tea