

KNOW YOUR ASSOCIATE

OUR PRODUCTS
YOUR STATEMENT

Associate Décor Limited

Associate Décor Limited (ADL) is a joint venture of the Associate Group and Kings Wood, Bengaluru. ADL currently manufactures premium decorative laminates and the most advanced and intelligent plain and pre-laminated particleboards in India. Future plans involve expanding the product offering to include veneers, MDF and flooring. Associate Décor Limited mainly operates in the panel products space catering to both Indian and International markets.

ADL's bouquet of brands caters to every need - from partitions for a swanky office to surfaces for a personal wardrobe. And with perfect integration and management at the manufacturing end, the spectrum of choice is the widest you will find in each and every product range. Associate's brands are an architect's inspiration, an OEM's quality delight and an end customer's trustworthy choice.

Associate Group

Associate Group is a diversified conglomerate with business footprints in industries ranging from timber and panel products to infrastructure and high-pressure gas cylinders. The Group's diverse businesses primarily cater to the requirements of the real estate, construction, infrastructure development and the automobile

industry domains. Its operations in the wood and timber businesses are currently spread across 4 continents and 14 countries making it among the largest operators in this industry.

Kings Wood Suppliers

Kings Wood, based in Bengaluru, started its business for the supply of pulp wood in 1989 and has grown consistently since. Kings Wood is the market leader in the pulp wood supply business in South India, catering to the biggest names in the pulp & paper industries and pulp business including Grasim, West Coast Paper

and BILT. Their large wood bank and widespread network of 28 wood collection depots add to their strong supply stability. Kings Wood is passionate about outstanding product quality, dedicated processes and committed relationships.





Particleboards or 'Engineered Boards' are panel products that are engineered from wood. Specific sized wood-chips are used in making the board, bound by synthetic resin pressed under heat and pressure. The boards produced are denser and more uniform in their constitution as compared to plywood or general wood.



MFC stands for Melamine Faced Chipboards, also known as Pre-laminated Particleboards. An MFC is made using particleboards or engineered boards, that are covered on the surface, using melamine impregnated decorative papers, pressed under heat and pressure. This gives the board an attractive and decorative look & feel. MFC's have a denser and more uniform constitution as compared to general wood and plywood.

ASSOCIATE'S FABULOUS FOUR



E0
PRE-LAMINATED
PARTICLEBOARD

*GRADE - II TYPE - II
IS - 12823*

E0 Plain & Pre-laminated Particleboards from Associate when tested with the perforator method, give results where the free formaldehyde in the particleboard shall be less than 5 mg per 100 gm of oven dry boards tested as per the requirements of IS 13745 for formaldehyde content and passes the requirements of IS 12823 for Grade II Type II (1990). This range of boards surpasses pre-requisites of most international furniture and real estate companies for their eco-friendly standards.



E1
PRE-LAMINATED
PARTICLEBOARD

*GRADE - II TYPE - II
IS - 12823*

The E1 Plain & Pre-laminated Particleboards from Associate pass the requirements of the IS 12823 Grade II Type II (1990) having formaldehyde content of less than 8 mg per 100 gm of oven dry boards when tested as per IS 13745. These boards fulfill stringent norms of bending strength, screw-withdrawal strength and modulus of elasticity allowing manufacturers tremendous flexibility in creation of furniture and allied products.



HUMIDITY & MOISTURE
RESISTANT
PRE-LAMINATED
PARTICLEBOARD

*GRADE - I TYPE - II
IS - 12823*

The Marine Series of Plain & Pre-laminated Particleboards from Associate are ideal for use in humid conditions like Type P7 as per EN 312. These boards are intended for specific use in flooring, walls or roofing. Our HMR boards have great values of bending strength, modulus of elasticity and thickness swelling after 24 hrs against 2 hrs as specified in IS 3087, apart from meeting the highest standards for general mechanical and physical properties.



EXTERIOR GRADE
PRE-LAMINATED
PARTICLEBOARD

*GRADE - I TYPE - II
IS - 12823*

The Exterior Grade series is a highly durable and strong range of Plain & Pre-laminated Particleboards produced by Associate. It is resistant to boiling water and cyclic changes in weather. These boards are superior to any of the other exterior grade particleboards produced in the country. The special property of the boiling water test of our boards is specified in DIN 68763 as equivalent to V - 100 Test. It is also given in IS -12823 for grade- I boards. The tensile strength of our boards is checked after immersing the sample in boiling water for 2 hrs against the standard value of 0.15 N /mm². Our board attains a value of 0.20 N /mm². Besides passing the tests in IS 3087 & 12823, Associate Particleboards also surpass all tests in EN standards. Truly the only "REAL" exterior grade series of boards ever to be manufactured in India.

APPLICATION TECHNIQUES



SCREWS & SCREW-DRIVING

Associate Particleboards can be screwed either on the face or on the edge by using fully threaded screws or you could also use special particleboard joinery fitting/ fixtures.

SELECTING SCREW TYPE

Quality parallel threaded screws are recommended for Particleboard.

SELECTING SCREW LENGTH

The length of the screw directly affects the holding power of the screws, for example, a 25mm screw has twice the holding power as a 13mm screw. This is most important when screwing into the edge of Particleboard panels.

SELECTING SCREW DIAMETER

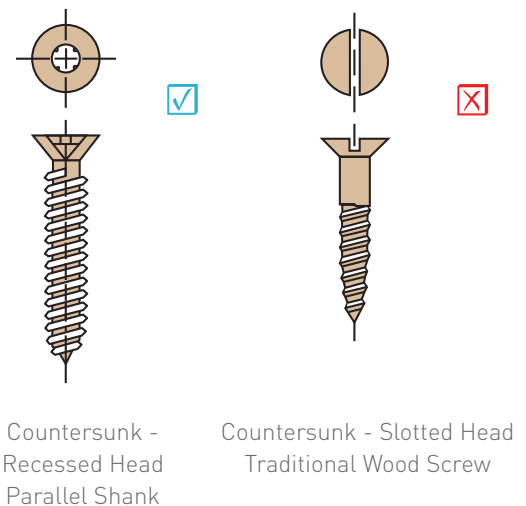
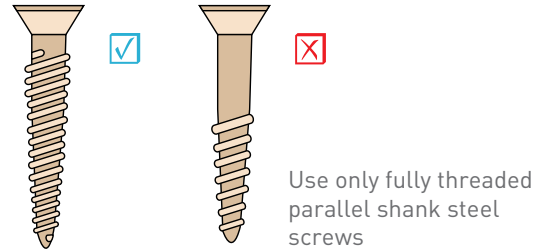
To avoid splitting the panel when screwing into the edge, the screw diameter should not exceed 20% of the panel thickness. For example, the maximum screw diameter for 16mm board is 6 gauge.

PILOT HOLES

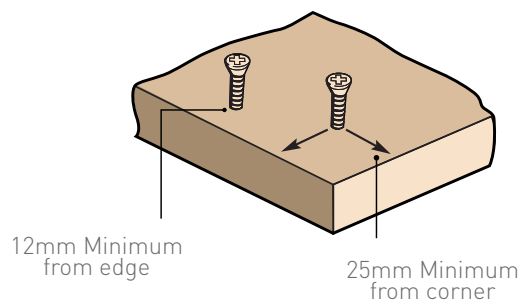
Correct pilot holes are essential to avoid splitting. The pilot holes should be approximately 80% of the screw core diameter and a minimum of 2mm beyond the screw penetration depth. Do not over tighten screws, as further turning after the screw is tight will reduce holding power.

SCREW LOCATION

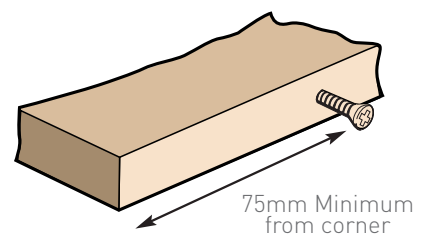
Screws should be carefully positioned to prevent splintering and breakout - no closer than 25mm to a corner and no closer than 12mm to the edge. When a long line of screws has to be used, it is a good idea to stagger the screws to prevent splitting the substrate being screwed to. When screwing into the edge, never place a screw closer than 75mm from the end of the panel.



Screws position on panel face



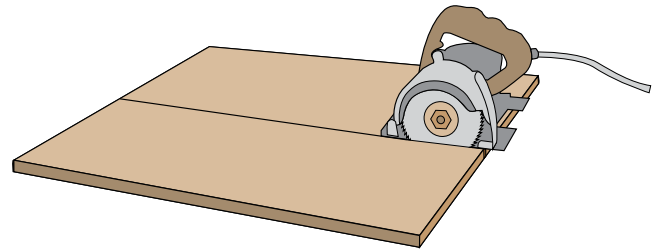
Screws position on panel edges





MACHINING

Associate Particleboards can be sawn, routed, spindled, planed or bored. The rate of feed should generally be slower than that used for natural timber and the cutting edges should be kept thoroughly sharp. If chipping is observed on the top face, raise the saw, if on the underside, lower the v mechanical feed is the best, but if hand feeding is done, it should be done at a steady rate.

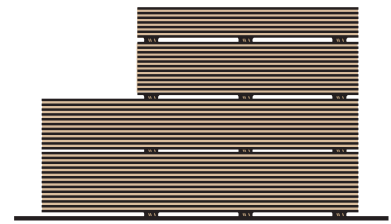


EDGE SANDING

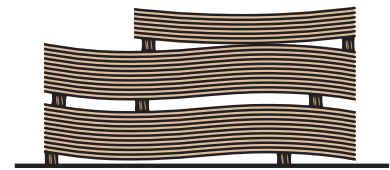
Cut edges will require sanding with 120 grit to 380 grit. Good quality contour cutting should minimise the amount of sanding required.

STORAGE AND HANDLING OF PARTICLEBOARD PRODUCTS

Storage and handling of Particle board panel products The following recommendations should be applied to maintain Particle board panels in good order and condition. The storage area should be protected from the sun, rain and wind. Open sided sheds would not be regarded as dry stores. All packs should be evenly supported at each end at intervals of not more than 750mm where the packs are multiple stacked, and no further than 150mm from the edge of boards. All supports should be vertically aligned. Keep work area clean. Avoid contact with abrasive surfaces or grit.



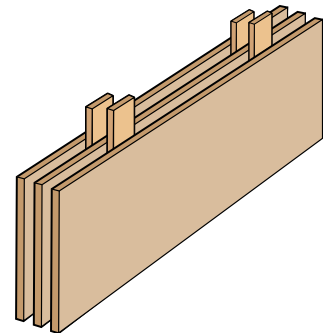
Correct storage method



Incorrect storage method

Conditioning in air

Conditioning in air is adequate for most locations. It involves exposing the boards in the room where they are to be fixed for long enough to allow them to reach a moisture content which is in balance with their surroundings and adjust their dimensions accordingly. To encourage free air circulation over all board surfaces, the boards should be arranged loosely as shown above, either vertically or horizontally. They should then be allowed to stand like this for a minimum of 48 hours.



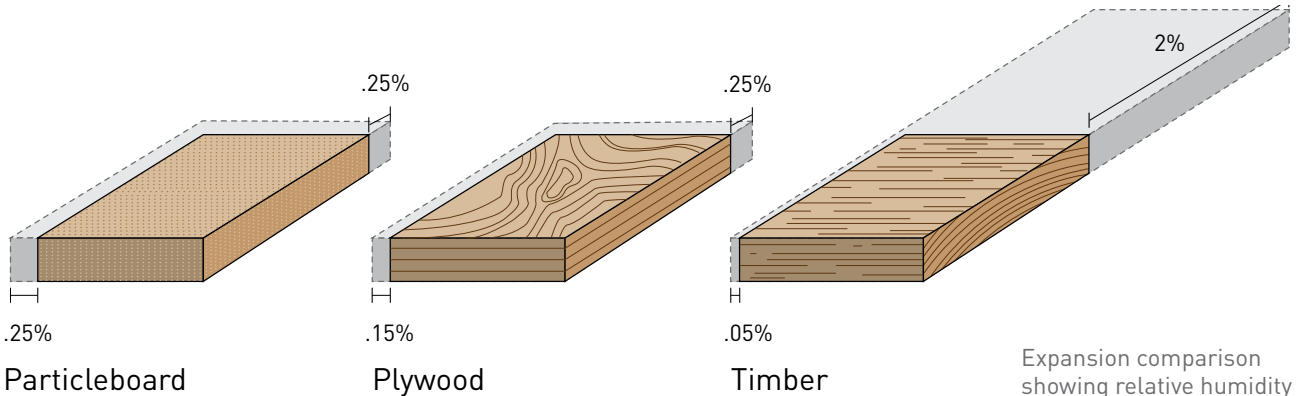
ENJOY A WORLD OF BENEFITS WITH PARTICLEBOARDS

BETTER WATER RESISTANCE

Water absorption can be reduced with edge banding. This edge banding must be done on all four sides of the board component. It is important to note that the strength to withdraw edge banding off a particleboard edge is higher than on MDF- the coarse form of the particleboard helps create a stronger adhesive bond than MDF.

BETTER THAN TIMBER

- Particleboard is cheaper than solid timber.
- Available in large flat sheets and hence larger furniture is possible.
- Timber is prone to warping and splitting with increased humidity.
- Timber is prone to termite and borer.



THERE IS REALLY NO COMPARISON

THE PARTICLEBOARD FACTS

Parameters	Associate Boards	Other Boards
Techonlogy	The Latest Continous Press	Old multi-opening /singleopening
Density Variation	Less than 3%	Approximately 10%
E0/E1	Yes	Maybe in the distant future
HMR	Yes	Wishful thinking!
Tool-friendliness	Low Tool Wear (best friends)	High Tool Wear (just acquaintances)
Input raw material	Eucalyptus Wood	Rubber Wood (Latex & Black Spots)
9x6 Size for least wastage	Yes	No
Grave Yard test	Pass	No
Thickness range	6mm - 40mm	9mm - 25mm

THE MFC FACTS

Parameters	Associate Boards	Other Boards
Durability	Long lasting	Take your chances!
Aesthetic beauty	European Textures & Decor	Chinese/Indian textures & Decor
Product matching	Available in HPL & Edge banding too	Not available
Uniformity	No shade variation	Significant shade variation
Color Fastness	Best	Least
Scratch Resistance	Great for horizontal application	No
Product synergy	Across HPL, Edge band and MFC	Maybe in the distant future
Cigarette Burn	Best	No
Porosity Test	Best	No
Range of Decors & Textures	100+ and exciting designs	25 and Boring Designs
Finished output	Durable and great looking furniture	Take your chances!

SPECIAL SIZES FOR OPTIMUM USAGE

The common sheet sizes in India for particleboard & MDF are:

- 9 foot x 6 foot or 2750mm x 1840mm
- 8 foot x 4 foot or 2440mm x 1220mm

In order to determine which sheet size is suitable it is always advisable to pattern lay your cutting plan and determine your board wastage factor. In a lot of cases with the 9x6 foot board, the wastage is minimal, therefore more cost effective.

When manufacturing furniture from wood based panels, the most common plank widths that need to be cut from the full sheet of MDF or Particleboard are 300mm, 450mm, 600mm and 900mm. These first cuts are usually done along the length of the board in these standard plank widths.

A 6 foot or 1840mm wide board generally has an advantage over a 4 foot or 1220mm width board. The plank cutting patterns below demonstrates this.

In terms of the length of tie board, a 9 or 2750mm height board has distinct advantages over an 8ft or 2440mm board:

- The extra length of the board makes up the small parts required for drawers and rails
- Ceiling height furniture such as wardrobes, library shelving and shop fitting can be created from single end panels that are up to 2750mm in height.
- Ceiling height end panels allows manufacturers to build one cabinet rather than building 2 cabinets i.e. one on top of the other
- The cost savings translate not only into less board material being used, but also a reduced requirement of hinges, handles and edge banding, with the added benefit of lower machining costs and labour expenses for assembly.

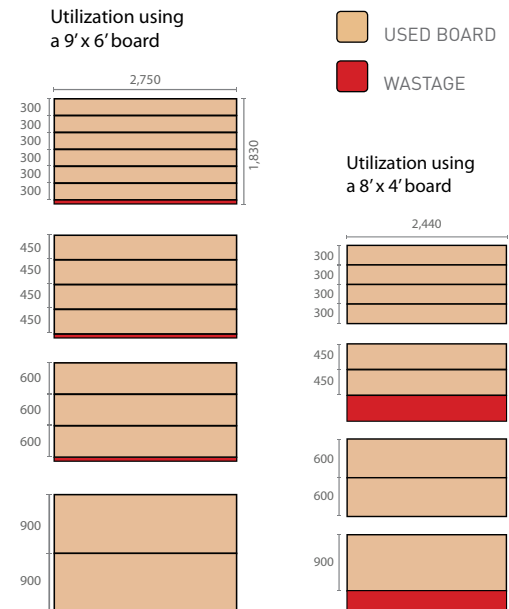
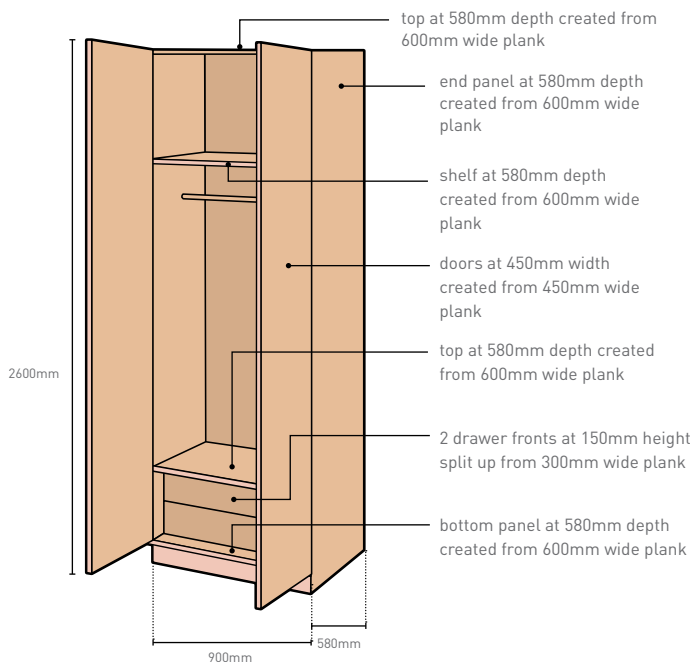
WIDEST RANGE. WIDER BOARDS.

Associate Pre-laminated Particleboards is the only brand that gives you **1840mm** width allowing your cutting machine to give you a full size 6 feet output. Expect 6 feet. In full.

The only brand that offers all grades of particleboards: Grade I (Exterior Grade), Grade II (Interior Grade), HMR Grade, E0, E1 & E2 grades, Green Boards and Fire Retardant Boards. You also have the widest choice. Literally. With sizes like like **9'x6', 8'x6', 7'x6', 9'x5', 8'x5', 7'x5', 8'x4', 7'x4', 9'x3', 8'x3', 7'x3'** and thickness from 6mm to 40mm, expect to be delighted.

Sizes	Thickness
9'x6'	6mm
8'x6'	8mm
7'x6'	9mm
9'x5'	11mm
8'x5'	12mm
7'x5'	16mm
8'x4'	17mm
7'x4'	18mm
6'x4'	22mm
9'x3'	25mm
8'x3'	30mm
7'x3'	35mm
6'x3'	40mm

CABINET MADE USING 9X6 BOARD



Technical Data Sheet (TDS)

ASSOCIATE MFCs

Grade II Type II (Interior)

MECHANICAL AND PHYSICAL PROPERTIES

Sr. no.	PROPERTIES	IS12823 Specification for MFC	Associate Décor standards for MFCs
		Specification	Standards
		Grade II Type II (Interior)	Grade II Type II (Interior)
1	Density kg/m ³	500 – 900	500 – 900
2	Variation from mean Density (%)	± 10	± 3
3	Moisture Content (%)	5 - 15%	5 - 13%
4	Water absorption (%) (Max.)		
	(a) After 2 hrs. soaking	15	12
	(b) After 24 hrs. soaking:	30	25
5	Thickness swelling in 2 hrs. %, (max)	8	4
6	Modulus of Rupture, N/mm ² (min.)		
	(a) Average	11	14
	(b) Minimum individual	10	12
7	Modulus of Elasticity, N/mm ² (min.)		
	(a) Average	2500	2500
	(b) Minimum individual	2200	2200
8	Internal bond, N/mm ²		
	(a) Up to 20 mm thickness:	0.3	0.4
	(b) Above 20 mm thickness:	0.3	0.4
9	Screw withdrawal strength (Min.), N		
	(a) Face	1250	2000
	(b) Edge (for thickness > 12mm)	750	1000
10	Internal bond, N/mm ²		
	(a) After cyclic test	-	-
	(b) After accelerated water resistance test	-	-
11	Abrasion Resistance (Min.) in number of revolutions:		
	Type – II	450	450
12	Resistance to Steam	Should not affect	Pass
13	Resistance to Cracking	Should not affect	Pass
14	Resistance to Stain	Should not affect	Pass
15	Resistance to Cigarette burn	Should not affect	Pass

Technical Data Sheet (TDS)

ASSOCIATE MFCs

Grade I Type II (Exterior)

MECHANICAL AND PHYSICAL PROPERTIES

Sr. no.	PROPERTIES	IS12823 Specification for MFC	Associate Décor standards for MFCs
		Specification	Standards
		Grade I Type II (Exterior)	Grade I Type II (Exterior)
1	Density kg/m ³	500 – 900	500 – 900
2	Variation from mean Density (%)	± 10	± 3
3	Moisture Content (%)	5 - 15	5 - 13%
4	Water absorption (%) (Max.)		
	(a) After 2 hrs. soaking	7	5
	(b) After 24 hrs. soaking:	15	12
5	Thickness swelling in 2 hrs. %, (max)	5	3
6	Modulus of Rupture, N/mm ² (min.)		
	(a) Average	15	17
	(b) Minimum individual	13	14
7	Modulus of Elasticity, N/mm ² (min.)		
	(a) Average	2500	2500
	(b) Minimum individual	2200	2200
8	Internal bond, N/mm ²		
	(a) Up to 20 mm thickness:	0.45	0.6
	(b) Above 20 mm thickness:	0.4	0.5
9	Screw withdrawal strength (Min.), N		
	(a) Face	1250	2200
	(b) Edge (for thickness > 12mm)	850	1200
10	Internal bond, N/mm ²		
	(a) After cyclic test	0.2	0.2
	(b) After accelerated water resistance test	0.15	0.15
11	Abrasion Resistance (Min.) in number of revolutions:		
	Type – II	450	450
12	Resistance to Steam	Should not affect	Pass
13	Resistance to Cracking	Should not affect	Pass
14	Resistance to Stain	Should not affect	Pass
15	Resistance to Cigarette burn	Should not affect	Pass

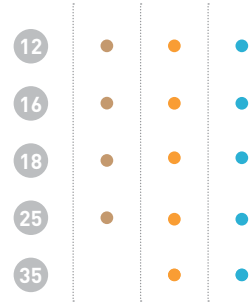
APPLICATION CHART



KITCHEN

Kitchen Cabinet, Dining Table, Storage units, Shutters and Cabinets

Board thickness variants (mm)

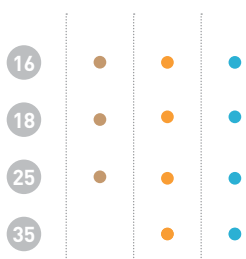


- Plain Particle Board Interior, Exterior and HMR grade.
- Pre-Laminated Particle Board Interior Grade.
- Pre-Laminated Exterior & HMR Particle Board.

LIVING ROOM

Wall Unit, TV Trolley, Centre Table

Board thickness variants (mm)



- Plain Particle Board Interior, Exterior and HMR grade.
- Pre-Laminated Particle Board Interior Grade.
- Pre-Laminated Exterior & HMR Particle Board.

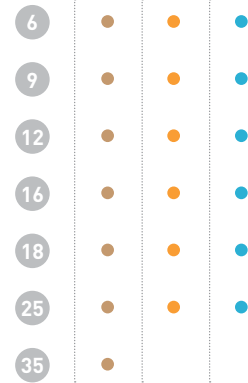




BEDROOM

Beds, Dressing Table,
Wardrobes

Board thickness variants (mm)

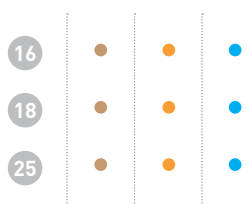


- Plain Particle Board Interior, Exterior and HMR grade.
- Pre-Laminated Particle Board Interior Grade.
- Pre-Laminated Exterior & HMR Particle Board.

OFFICE

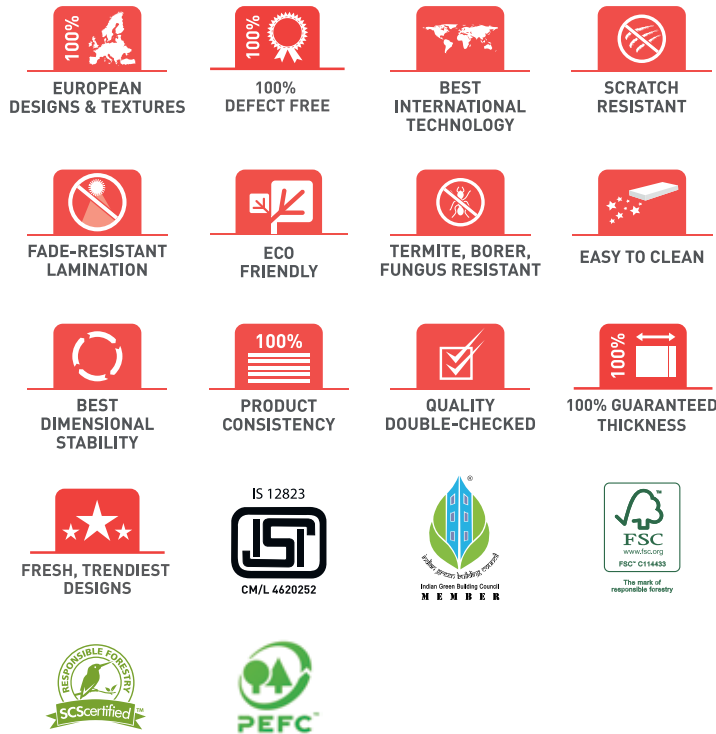
Tables, Credenza, Storage
Unit, Filing Cabinet, Drawers.

Board thickness variants (mm)



- Plain Particle Board Interior, Exterior and HMR grade.
- Pre-Laminated Particle Board Interior Grade.
- Pre-Laminated Exterior & HMR Particle Board.





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