

Laxmi

Laxmi structural plywood is an engineered wood panel designed to be a high-strength sheet for use in general structural building and construction, subject to an application's load bearing requirements. Commonly used as an un-treated panel, but it is also available in treated variant typically HS-S, H2 or H3. Made of selected range of gymnosperms & angiosperms specie timer, structural plywood is manufactured using type A phenolic adhesive. The product conforms to IS: 10701 (2012).

GRADE & TYPE

- Overlaid APA's structural – A-A, A-b, A-c, C-C, C-D, D-D, sturd-I-floor, Underlayment, CC plugged & CD plugged.
- Non-overlaid APA plywood panels surface finish : Sanded touch sanded & un-sanded

STANDARD THICKNESS (IN MM)

6, 9, 12, 16, 19, 25.

STANDARD SIZES (IN MM)

2400 x 1220
1200 x 1200

USES

- Beams
- Internal Structures
- Subfloors
- Shipping Crates
- Wall bracing
- Roof bracing
- Roofing substrates
- Truck floors

ADVANTAGES

- 2 x shear carrying capacity compared to timber
- Offers greater dimensional stability
- Offers high strength to stiffness to weight ratio.
- Resistant to chemicals, corrosion and damage.
- Allows nails close to panel edges.



A Premium Product Of :

Laxmi Timber Industries

Bentnick Chambers, Suit 204 & 208A (2nd Floor)
37A, Bentnick Street, Kolkata - 700 069, W.B.

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Factory : Vill & P.O. : Balakuthi, Baxirhat, Coochbehar, West Bengal

Laxmi Teak Ply, Board & Door

Laxmi teak veneer overlaid ply, board and doors are of extremely durable, technically sound and aesthetically of highest caliber. These changes the look of applied furniture into a beautifully vintage spectrum post mirror / mat finish polish. These enhance the life and appearances of each furniture and door items.

Bonded with thermosetting adhesive in specific temperature and pressure, these Burmese Teak Veneer overlaid panels are manufactured in accordance with (similar to) IS: 1308.

GRADE & TYPE

- BWP, BWR & MR

STANDARD THICKNESS (IN MM)

4, 6, 9, 12, 16, 19, 25, 32, 35.

STANDARD SIZES (IN MM)

- Ply - 2440 x 1220 & standard ordered sizes
- B/B - 2440 x 1220, 2440 x 920, 2140 x 1220, 2410 x 920, 1840 x 1220, 1840 x 920
- Doors - Length 1840 up to 2440 in every 51 mm difference & 69 mm onwards up to 1220 mm in every 51 mm difference in width.

USES

- Furniture
- Aesthetic doors, windows
- Interior make overs
- Partition & false ceilings

SALIENT FEATURES

- Accuracy & stability in dimension.
- No expand, contract, warping & delamination when subjected to change in atmospheric condition.
- Free from borer, termite & powder.



Process

Laxmi Timber Industries plant is located at Balakuthi, Jorai More, Boxirhat, North Bengal. The 4.5 Acre production complex annually rools out high grade ply, mainly from most stable Dipterocarpus species.

The production facilities include a range of state-of-the-art equipment for cutting, shaving, splicing, polishing and chemical treatment as well as for research and development. Commercial, Marine, Concrete Shuttering, board & doors are all produced at the plant.

Technical Story

Automatically controlled jet drying and dampening. Adhesive preparation.

- Un-extended phenol formaldehyde bonded resin for marine & concrete shuttering.
- Preservative treated each plywood.
- Dipterocarpus species used.
- Telescopic spindles and back up roll mechanism.
- Pre press and calibration.
- Wrap-proof technology.

Our Projects

Some of our recomended projects :

1. Jalpaiguri High Court - Shuttering
2. Tripura Govt. Work - Shuttering
3. Real Decor, Kolkata - Shuttering, Plywood, boards,
4. Muskan Group - Skylake - Shuttering
5. Ambuja Utalika - Shuttering
6. Prasad Group - Shuttering
7. Eden group - Solaris Project Joka - Flush Door
Eden Group - Solaris Project Srirampur - Flush Door

Export Nepal, Bhutan

And many more, since 1981

Laxmi Timber Industries has been one of the pioneers in plywood manufacturing giants in India. We believe in applying technology and quality with innovation. This philosophy has been the cornerstone in all our processes. It has led us to design and deliver vintage as well as contemporary life style statements that have become synonymous with modern living. Our quality products have been re-defining. They are giving long and durable product range for living spaces. Laxmi Timber Industries, our mother concern, came in to existence in 1981 as a result of foresightedness of the visionary Mr. Dipak Nandy. Since then, the company has taken giant strides and today, the quality product seller of multi use plywood, block board, flush door & shuttering, the Indian plywood market & are still growing.

Laxmi Timber's products are automatic choice of architects interior designers, contractors and carpenters. They strongly recommend our products for transforming ordinary steel and concrete structures to expressions of ones personality. From flexible plywoods to concrete shuttering plywoods, marine plywoods to fire retardant plywoods, Lami doods to teak plywoods, we have the right product to target and fulfill different building needs.

Now in 43rd year of operations, Laxmi Timber enjoys a unique brand identity in the market setting new quality benchmarks. We are guided by simple philosophy of adding more value-for-money products and at the same time, improving upon our existing product portfolio through extensive research and customer feedback.

Key Milestones

- One of the oldest running company for plywood, board, doors & shuttering.
- Constant product improvisation, quality enhancement and most competitive rates.
- Our success is reflected by a consistent year-on-growth rate, with "Construction World".
- Today, we are a one-point manufacturing unit of all kinds of plywoods and plywood related products, offering highest standard quality.

Our CSR (Corporate Social Responsibility)

For Laxmi Timber Industry Corporate social responsibility is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and that of the local community and society at large.

Laxmi Timber believes that a company is a family, a group of professionals working together in harmony at all levels and grades and so it's the top priority of the company to take the greatest care of its most valuable asset.

TECHNICAL SPECIFICATION

Average failing load in Newton	Dry State	Factory Value	WF
	1350	1475	No req. No less than
	1250-1349	1375	60 No less than 80
	1100-1249	1150-1300	
Resistance of water	1000	1100	No req. No less than
	900-999	950-1050	60 less than 80
	Requirement	Factory Value	
2. Tensile strength in N			
Along the grain	55	65	
Across the grain	35	40	
3. Compressive strength			
Along the grain	35	45	
Across the grain	30	38	
4. MOR	Along the grain		
	Average	50	60
	Individual	45	55
	MOR	Across the grain	
	Average	30	38
	Individual	27	32
5. MOE	Along the grain	M 6700 – Ave 7500	M 7200 – Ave 8000
	Across the grain	M 3600 – Ave 4000	M 3800 – Ave 4250
6. Panel Strength		12.5	15
7. Modulus of rigidity	588	620	
8. Rolling shear strength	3	4.25	



Product List

- 01 Densified Concrete Shuttering Plywood (IS 4990)
- 02 MR Alternate Plywood (IS 303)
- 03 MR Red Plywood (IS303)
- 04 BWR Red Plywood (IS 303)
- 05 BWR Regular Plywood (IS 303)
- 06 Marine Plywood (IS 710)
- 07 I-Com Block Board - Hardwood (IS 1659)
- 08 I-Com Block Board - Pine (IS 1659)
- 09 X-Com Block Board - Hardwood (IS 1659)
- 10 X-Com Block Board - Pine (IS 1659)
- 11 Pine Flush Door
- 12 Hardwood Flush Door
- 13 Flexible Plywood
- 14 Teak Ply, Board & Door
- 15 Fire Retardant Ply, Board & Door
- 16 Chequered Plywood
- 17 Calibrated Ply, Board & Door
- 18 Structural Plywood
- 19 Virus-Safe Plywood
- 20 LEE Ply, Board & Door

Laxmi

Laxmi Flexi ply is roll-able in nature and can be moulded into round shape you want. Be it designer chairs for your drawing rooms, smart cabinets for kitchen or good-looking yet comfortable furniture for the office. Like all our other products, Flexi ply is also borer and powder-proof, so your furniture is guaranteed to last a long, long time. It is ideal for home furniture of all kinds, kitchen cabinets wall paneling, to cover pillars, staircase banister and office furniture.

APPLICATIONS

Kitchen, Balconies, Winding staircase, Open air roof systems, Other curve structures

STD. THICKNESS (MM)

- 6, 9, 12

STANDARD SIZES (FT)

- 8x4

Technical Strength

Thickness	6mm, 9mm, 12mm
Composition	Hot pressed with thermo-setting BWR Grade adhesive
Density	750 kg per Cubicmeter
Bending Radius	
4mm	up to 10cm radius
6mm	up to 15cm radius
8mm	up to 25cm radius
Direction of flexibility	Across the Grain - Lob sided



Products

Product Range

- Benson Gold
- Benson Club
- Benson Block Board
- Benson Flush Door
- Benson Shuttering Plywood
- Benson Flexi Ply

always forever... ▶



Laxmi

Laxmi FS concrete shuttering plywood is made of high density dipterocarpus species assembled in auto assembly line for dimensional accuracy, bonded under high temperature and pressure with unextended exothermic synthetic resin in high capacity densified hot press (2000 Ton) with as minimum compression 30%, used for concrete purpose. Manufactured with select hardwood, it withstands the loads and forces encountered during the pouring of concrete and vibrations. It is the result of continuous experiments undertaken at our modern laboratories to meet the growing demand from the construction industry for highly durable concrete shuttering plywood.

APPLICATIONS

- Construction, Repair and Maintenance of Buildings, Bridges, Beams, Fly-overs, Vehicle Bodies, Roofing

STD. THICKNESS (MM)

- 12

STANDARD SIZES (FT)

- 8x4

TECHNICAL SPECIFICATIONS

Strength Properties

Shuttering Plywood	6mm	9mm	12mm	16mm	19mm	25mm
Modulus of Rupture (kg/cm ²)	-	-	-	-	-	-
Parallel to face grain	750	650	600	600	600	600
Perpendicular to face grain	350	450	500	500	500	500
Tensile Strength (kg/cm ²)	-	-	-	-	-	-
Parallel to face grain	500	425	400	375	375	375
Perpendicular to face grain	250	325	350	375	375	375
Specific Gravity : 0.68 gms< / cc	-	-	-	-	-	-
Density : > 0.80 gms/m ³	-	-	-	-	-	-
Super coat	80 gsm phenatic paper coat, all corners sealed.					



about our product

Since our products are manufactured from the species that are from Dipterocarpus origin we, therefore can guarantee Density, premium quality and Natural Resistance towards termite and borers. Our sheets and panels are manufactured by adopting the latest technology and therefore bear the great tensile strength along with the incredible bonding qualities.

Our long duration experiments and testing mechanism have enabled us to bring forth the toughest plywood sheets which are already winning hearts of the major operations in the construction industry. Moreover, we proudly claim that Benson panels Shuttering plywood is manufactured in accordance with the rigid standards specified by the IS 4990.

Our commitment care and confidence of operation makes us claim that all our products are the result of long trials undertake by our industrious R&D team and have been borne through the latest technology - All products are of premium quality. Special care have been taken to make the products stubborn so that in the easy course they stand rock strong against the weakening agents like Bores and termites. All our product ranges from plywoods, Block Boards, Flush Doors and the Shuttering Ply are weatherproof and stand triumphant against all kind of adversaries of weather attacks.

Our shuttering plywoods are made of unextended exothermic boiling water proof synthetic resin, hot pressed at a temperature of 140°C + with an minimum compression 30%. All glue line, high compression, Seasoned dipterocarpus species makes tough with high density and cuttable for repeated usage, with high load bearing and shock absorbing capacity, Concrete Shuttering FS plywood.

Laxmi

Laxmi Block Boards are made up of imported Pinewood timber, cut of central beams and composed core stock of battens of high resistance & quality combined with anti-borer & anti-termite to offer a Block Board of giving efficient and needed protection & to produce a long lasting Block Board. All the wooden components of the Block Board are seasoned under accurate temperature to obtain required moisture content percent according to IS: 1141 in our modern seasoning plant and then cut with perfect precision to get uniform thickness of battens. Block Boards are bonded with unextended endothermic adhesive for MR grade & unextended exothermic adhesive for BWP grade conforming to IS:848-2006 & hot pressed under controlled temperature & high pressure to get bonding.

Benson Block Boards give exceptional strength & durability to your wall cabinets, cupboards, wardrobes & other furniture woodwork. The artisan will find it easy & hassle-free to work since these provide additional grip for screw and nails.

GRADE & TYPE

- Boiling Water Proof (BWP) X - Com
- Moisture Resistant (MR) I - Com

STANDARD THICKNESS (IN MM)

- 19, 25 & as p

STANDARD SIZES (IN MM)

- 2440X1220, 2440X920
- 2140X1220, 2140X920
- 1840X1220, 1840X920 and as per specific orders.

STANDARD SIZES (IN MM)

- 2440X1220, 2440X920
- 2140X1220, 2140X920
- 1840X1220, 1840X920 and as per specific orders.

USES

- Interior & exterior woodwork, furniture like: wardrobes, beds etc.
- Partition in offices, flooring & seats of bus bodies, railway coaches, indoor panels & shutters.

SALIENT FEATURES

- Accuracy & stability in dimension.
- No expand, contract, warping & delamination when subjected to change in atmospheric condition.
- Free from borer, termite & powder.



GOLD TEST RESULT

TESTS	REQUIREMENTS	OBTAINED RESULTS
Types of Surface of Plywood	AA/BB/AB	AA
Dimensions :		
Length :	Tolerance : +6 mm , -0 mm	+2 mm
Width :	+3 mm , -0 mm	+1 mm
Thickness:		
a) Less than 6 mm	±10%	±3%
b) 6 mm & above	±5%	±4%
Squareness	0.2%	0.08%
Edge straightness	0.2%	0.05%
Moisture Content %	5-15%	8%
Density:	70 gm/mm ²	80 gm/mm ²
Static Bending Strength:	Grade: BWP	Grade: BWP
	MOR MOE	MOR MOE
a) Minimum Average:	40 5000	55 6500
b) Individual:	36 4500	45 5500
(Along the grain)		
Static Bending Strength:	MOR MOE	MOR MOE
a) Minimum Average:	20 3600	30 3500
b) Individual:	18 3600	25 3000
(Across the grain)		
Glue Adhesion Water Proof Test	Minimum	
BWP Grade : 72 hrs Boiling and dried for 16 hrs at a temperature of 100 °C (3 cycle)	Pass Standard	Pass Standard
Mycological Test	Minimum	
After conditioning of sample for 3 weeks at 27±2°C	Pass Standard	Pass Standard

UNIT OF MEASUREMENT*

Modulus of Rupture (MOR) (N/mm²)
Modulus of Elasticity (MOE) (N/mm²)

our product gallery

Laxmi

Laxmi Gold BWP ply is a general purpose plywood, manufactured from carefully selected timber of high density and superior grade to ensure durability and the desired mechanical properties. Bonding with high grade **unxetaled exothermic** synthetic resin and strict attention to process control, makes Benson Gold BWP ply mechanically strong, dimensionally stable and boiling water proof. The manufacturing process conforms strictly to the norms laid down under IS: 710.

GRADE

- Boiling Water Proof (BWP)

CONSTRUCTION

- Species from
- Diptera carpus group

STANDARD THICKNESS (IN MM)

- 4,6, 9, 12, 16, 19, 25

STANDARD SIZE (IN MM)

- 2440 x 1220, 2440 x 920
- 2140 x 1220, 2140 x 920
- 1840 x 1220, 1840 x 920

USES

- In Boat planks, submarine cabins,
external partition etc.

SALIENT FEATURES

- No Delamination, Bleed-Through,
Warping & Indentation
- Suitable for all weather conditions
- Borer, Fungus Termite Proof



Laxmi

Laxmi Flush Doors are of guaranteed quality. Flush Doors are made in varying constructions & thickness without impairing efficiency to meet exactly the security needs for the building. The wide range of choice in quality of material like: Timber, adhesive used and processing techniques enable manufacturer to offer a Flush Door capable of giving efficient and needed protection. Excellent quality Flush Doors are manufactured from 100% Pinewood and are of solid core construction with BN & BD type. Flush Doors are framed in seasoned battens; both the stiles are made with one finger joint, pressed at high pressure & controlled temperature and bonded with BWP grade phenol formaldehyde synthetic adhesive conforming to IS: 848-2006. Laxmi Flush Doors combine simplicity, pleasing appearance, clean & beautiful finish.

GRADE

- Boiling Water Proof (BWP)

STANDARD THICKNESS (IN MM)

- 25, 30, 32, 35 and as per specific orders.

STANDARD SIZE (IN MM)

- 1840 upto 2440 mm in length in every 51 mm difference and from 61 mm to 1220 mm in every 51 mm difference in width.

USES

- Widely used for entrance and living area doors,
ideal where splashing is common such as toilet,
bathrooms, balcony doors etc.

SALIENT FEATURES

- Boiling water proof.
- Borer, termite & powder free.
- Accuracy & stability in dimension,
- No warping & delamination when subjected to change in atmospheric condition.
- Excellent screw holding capacity.
- Sufficient strength in the sheathing material to resist normal knocks and blows.
- It is economical in comparisons to the other products due to durability.



BLOCK BOARD TEST RESULT

TESTS	REQUIREMENTS	OBTAINED RESULTS
Core		
i) Moisture Content,%	12 Max.	8.8
ii) Width of strips, mm	30 Max.	26
iii) Width of edge strips along the length, mm	45 Max.	37
Dimensions	Tolerance on declared value	
a) Length in	+6 mm, -0 mm	1831
b) Width in	+3 mm, -0 mm	916
c) Thickness in Min / Max	±5%	19.20 - 19.42
d) Variation in thickness in	0.5 mm	0.22
e) Edge straightness, %	0.2%	0.08%
f) Squareness,%	0.2%	0.05%
Surface Defects	As per clause 8.1.3/6.3.3	Conforms to the requirements
Dimensional Changes caused by humidity		
a) At 90% RH		
i) Difference in length	±1mm	0.09
ii) Difference in thickness	±1mm	0.10
b) At 40% RH		
i) Difference in length	±1mm	0.09
ii) Difference in thickness	±1mm	0.08
c) There shall be no delamination at the extreme ranges of humidity	No delamination	Complies to requirement
d) There shall be no change in local planeness measure as d/L < 1/150	<1/150	Complies to requirement
Resistance to water, BWP Grade: boiling for 72 h MR Grade: 3 hrs soaking at 40 ± 2°C	Min. Pass Standard Min. Pass Standard	Pass Standard Pass Standard
Adhesion of plies	Min. Pass Standard	Pass Standard
Modulus of Rupture (N/mm²)	BWP MR	BWP MR
a) Average	50 40	70 50
b) Minimum individual	42 34	65 40
Modulus of Elasticity (N/mm²)		
a) Average	5000 4000	6000 5000
b) Minimum individual	4200 3400	5000 4000
Spot Test	Shall show through and through penetration of preservative of chemical	Clearly visible through and through penetration of preservative chemical

FLUSH DOOR TEST RESULT

TESTS	REQUIREMENTS	OBTAINED RESULTS
Dimension & Squareness	Tolerance:	
Height	±5 mm	± 2 mm
Width	±5 mm	± 2 mm
Thickness, Min/Max	±1 mm	30.00 - 30.50mm
Variation in thickness between any two points	Max. 0.8	0.50mm
Squareness	Deviation not more than 1mm per 500mm length	0.50mm
General Flatness		
Twist	Max. 6 mm	Less than 6 mm
Cupping	Max. 6 mm	Less than 6 mm
Warping	Max. 6 mm	Less than 6 mm
Local Planeness	Max. 0.5 mm	0.18
	No cracking, tearing or delamination. Indentation depth, max 0.2mm	No cracking, tearing or delamination. 0.14mm
Flexure Test (Deflection in mm) 15 minutes after 50 kg 3 minutes after load removal	Deflection at maximum load not greater than 1/30th of length or 1/15th of width, whichever is less. Residual deflection not greater than 1/10 of maximum deflection.	MD: Less than 1/30th of length & 1/15th of width. RD: Less than 1/10th of MD
Edge loading Test (deflection in mm) After 15 minutes of 100 kg loading 5 minutes after load removal Lateral buckling	Deflection at maximum load not greater than 5 mm. Residual deflection after removal of load not greater than 0.5mm. Not more than 2mm during loading. No residual buckling after load removal.	MD: Less than 5mm. RD: Less than 0.5mm Lateral Buckling: 0.1mm Conforms to the requirement
Shock Resistance Test Soft & light body impact Soft & heavy body impact	No visible damage No visible damage	Conforms to the requirement Conforms to the requirement
Slamming Test	No visible damage after 50 drops.	Conforms to the requirement
Glue adhesion Test	No delamination/ No single delamination of more than 50mm in length & more than 3mm in depth	Conforms to the requirement
End immersion Test	No delamination 8 cycle-1 day wet & 1 day dry	Conforms to the requirement
Knife Test	Minimum Pass standard	Pass Standard
Screw withdrawal Test	Not less than 1000 N Surface condition : No visible damage to the surface either by delamination or extra chipping off	3000 N Conforms to the requirement
Buckling test (deflection in mm) After 5 minutes of 40 kg loading 15 minutes after load removal	No deterioration Initial Deflection not greater than 50mm Residual deformation after 15 minutes of unloading not greater than 5mm	Conforms to the requirement
Misuse test	No permanent deformation of the fixing or any other part of the door set in hindering its normal working after the test.	Conforms to the requirement
Varying humidity test	No visible warping, twisting or delamination. Maximum departure from the general planeness not more than 0.1mm Recovery- At least 90% of the change in dimension.	Conforms to the requirement