

Bringing a CHANGE in the Roofing Sheet Industry with the use of

From the house of

**TIMPACK** 

### "BAMBOO MAT CORRUGATED ROOFING SHEETS (BMCS) alongwith BAMBOO MAT RIDGE CAPS (BMRC)"



Roofing, Walling, Container/ Packaging, Sandwich Construction, Prefabricated Houses....now with BMCS









Bamboo Mat Corrugated Roofing Sheets (BMCS) which is the FIRST of its kind in the World & manufactured as per ISI: 15476-2004 alongwith Bamboo Mat Ridge Caps with utmost care in quality are an ideal replacement for timber & wood based products, cement & G.I./ Aluminum based products. They are ideally suited for the climatic conditions in India since it being Eco - Friendly, 100% Boiling Water Proof, Termite Resistance, Fire Retardant, Fungus Proof & Borer Free, Low Thermal Conductivity, High Load Bearing Capacity, High Screw Holding Capacity, dimensional stability, Durable, Light but strong and possess high resilience. BMCS & BMRC are manufactured with the "Technical Know how" from IPIRTI, Bangalore & BMTPC, New Delhi.



100% Boiling Water Proof



Termite Resistance



Retardant







High Load Bearing Capacity



Low Thermal Conductivity

### **Product Usage Areas:**

Industrial Complexes, Airport Infrastructure, Sports Complexes, Hotels, Hospitals, Schools, Commercial/ Residential & Urban development, Resorts, bus shelters, warehouses, local household consumption such as pre-fab houses, car parking sheds, terrace houses, farmhouses including stud farms, tree houses etc.

#### **Product Sizes & Thickness:**

Product	Sizes	Thickness	
	> 8' X 31/2' or 2.44m' X 1.05m - 12 Kgs. > 6' X 31/2' or 1.83m X 1.05m - 9 Kgs.	3.5-4.0 mm	
BMRC (Male & Female Ridge Caps)	> 1½ X 3½ or 0.43m X 1.05m - 2 Kgs.	3.5-4.0 mm	



# Comparison of Different Corrugated Roofing Sheets:

S.No.	Characteristics	Bamboo Mat Corrugated Roofing Sheet (3.5-4.0mm)	Asbestos Cement Corrugated Sheet (6mm)	G.I. Corrugated Sheet (1.0mm)	Aluminum Corrugated Sheet (1.2mm)
1	Load Bearing Capacity	5.65 N/mm	5.45 N/mm	4.84 N/mm	1.67 N/mm
2	Fire Rating	Retardant	Retardant	Tendency to Twist & Melt	Tendency to Twist & Melt
3	Thermal Conductivity	Very Low	High	Very High	Very High
4	Weather effects	None	None	Surface Rusting	Surface Rusting
5	Impact of Falling Objects	No impact	Sheets tend to crack	Sheets tend to get dented	Sheets tend to get dented
6	Effects of High Winds	No impact	minimum	Unacceptable rattling sound	Rattling sound
7	Noise Pollution	Very Low	Low	High	High

### **Typical Technical Details:**

Properties	BMCS - IS: 15476 - 2004		
Density	0.89 g/cm³		
Water Absorption (24 hrs)	2.9 %		
Load Bearing Capacity:			
a) Dry State	5.65 N/mm		
b) Wet State	4.75 N/mm		
Fire Resistance			
a) Flame penetration	14 minutes		
b) Rate of Burning	22 minutes		
c) Surface spread of flame, maximum area of char in mm²	2353 mm²		
Impermeability	Conforms		
Resistance to rolling weight	Conforms		
Cyclic Test	No delamination		
Thermal Conductivity	0.1928 k.cal/m-ºc for BMCS and 0.3422 k.cal/m-ºc for ACCS		





## GLANCE AT THE INSTRUCTIONS FOR FITTING THE BMCS alongwith BMRC & Maintenance of BMCS & BMRC:

- 1. The roof slope should be minimum 25° OR maximum 40°
- The <u>maximum purlin spacing should be 3'-3" and not more</u> under any condition or design
- 3. Sheet should be laid with minimum end lap of 150mm and side lap of one corrugation.
- BMCS should be fixed to the purlins of structural members with <u>J or L hook, bolt only</u> and with proper nut, cup washer and bituminous washer. <u>No Nails or Screws to be used of any kind under any circumstances.</u>
- All holes for fixing the J / L hook should be made with hand drill OR Electric Drill machine. It should NEVER be punched. Holes should be of exact size.
- All holes should be made only on the CREST( Crown of Corrugation) & it <u>Should not</u> be done in the valleys under any condition. (See Fig. 1)
- 7. Cutting should be done with fine teeth saw and NOT with coarse teeth saw
- For ridge fixing, please use our Bamboo Mat Ridge Caps Male & Female Ridge Cap and fix it to close the roof.
- Ridges and Hips shall be covered with our Bamboo Mat Ridge Cap (BMRC) Male & Female Ridge Caps with a minimum 150 mm lap on either side over the roofing sheets. The end lapses of the ridges and hips and between ridges and hips shall also be not less than 150 mm. (See Fig. 2)





### OPTIONS AVAILABLE:





Green

Orange



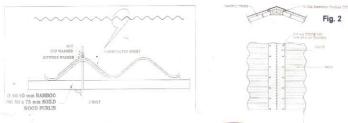


Sky Blue

Silver

\*her colours as per customers choice available subject to quantity of product required





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### BACK TO BASICS WITH NATURE FROM THE USE OF A WONDER GRASS

From the house of

TIMPACK

CALLED

"BAMBOO MAT BOARD (BMB)"



Wall Paneling, False Ceiling & Ceiling Tiles, Partitions, Doors & Panel Door Inserts, Windows & Tables, Packaging & Storage, Any Other Interior Applications....now with BMB









The zig-zag pattern and natural design of Bamboo Mat Board (ISI: 13958 certified product) gives your interiors a very classy, luxurious & glamourous appearance. Bamboo Mat Board the most elegant, eco-friendly alternative for wood, mineral fiber board, pvc, gypsum board etc. and also being stronger, durable & superior to conventional products. BMB offers unmatched quality, aesthetic style and durability and is the ideal choice of smart and good looking interiors. These products can also be polished, painted, coated, etc. as per your liking. BMB is manufactured with the "Technical Know how" from IPIRTI, Bangalore & BMTPC, New Delhi.



100% Boiling Water Resistance



Termite Resistance



Fire Retardant



### **Product Usage Areas:**

Sports Complexes, Airport Infrastructure, Hotels, Hospitals, Schools, Commercial/ Residential & Urban development, Resorts, local household consumption such as pre-fab houses, home interiors etc.



Fungus Proof & Borer Free



Low Thermal Conductivity

#### **Product Sizes & Thickness:**

Sizes	Thickness	Approx. Weight per Sqm
> 2' X 2' or 0.595m X 0.595m	3 mm	2.70 Kgs.
> 6' X 3' or 1.83m X 0.92m	4 mm	3.70 Kgs.
> 6' X 4' or 1.83m X 1.22m	6 mm	5.40 Kgs.
> 8' X 4' or 2.44m X 1.22m	9 mm	8.40 Kgs.
	12 mm	10.00 Kgs.



#### **Typical Technical Details:**

SI.No.	Properties	4 MM	6 MM
1.	Density	700kg/m³	800 kg/m <sup>3</sup>
2.	Moisture Content	9%	8 %
3.	Internal Bond Strength		
	a) Dry State :		
	(i) Average	0.85 N/mm²	0.96 N/mm²
	(ii) Minimum Individual	0.83 N/mm²	0.96 N/mm²
	b) Wet State :		
	(i) Average	0.56 N/mm²	1.11 N/mm²
	(ii) Minimum Individual	0.43N/mm²	0.79N/mm²
4.	Modulus of Rupture (Avg.)	74 N/mm²	79 N/mm²
5.	Screw Withdrawal Strength	3200 N	4300 N
6.	Tensile Strength	29 N/mm²	30 N/mm²
7.	Thermal Conductivity	0.182 k.cal/m-°c	0.194 k.cal/m-°c

## Comparison of Different FALSE CEILING MATERIALS:

S.No.	Characteristics	Bamboo Mat Board	Mineral Fiber Board
1	Fire Rating	Retardant	Flammable
2	Thermal Conductivity	Very Low	High
3	Weather effects (Seepage in Building)	None, since boards are 100% BWR	boards are damaged since they are not water resistance
4	Handling of Materials	No damages, since boards are compact and solid	

## Comparison with OTHER PRODUCTS:

Bamboo Ma	parison of Strength at Board (BMB)	Ply	wood	
(Pnenoi	Bonded)	(Phenol Bonded)		
3 mm	(i.e. AS STR	ONG AS)	5 mm	
4 mm			6 mm	
6 mm			12 mm	
9 mm			18 mm	
12 mm			25 mm	

Source: National Mission on Bamboo Technology and Trade Development. Published by Planning Commission, Govt. Of India, April 2003





# GLANCE AT THE INSTRUCTIONS FOR FITTING & MAINTENANCE OF BAMBOO MAT BOARD (BMB):

- 1. There is no short cut to good fixing.
- 2 Bamboo Mat Board-
  - (a) Bamboo Mat Board can be screwed or nailed as per the requirement.
  - (b) When the Bamboo Mat Board is cut, these edges has to be sealed by using any of the following coating available in the market.
    - 1) Exterior Alkoid Varnish.
    - 2) Poly Varithene Coating.
    - 3) Bituminized rubber sealant.
    - 4) Silicon Based sealant.
  - (c) Please note that our Bamboo Mat Board, if used for outside (Exterior) use then the customer must give a waterproofing coating to give it a longer life against weathering effects.
- 3. Cutting should be done with fine teeth saw and NOT with coarse teeth saw.
- 4. <u>Storage of Materials:</u> The BIVIB procured from us must be stored in a covered shed/ location at your site with sufficient cross ventilation inside the covered shed/ location. The BIVIB must also be stacked on elevated wooden pallets <u>which are not touching the</u> ground level.

#### KINDLY REFER TO THE INSTRUCTION MANUAL

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## ONE SIDE - COLOUR COATED OPTIONS AVAILABLE:



Other colours as per customers choice available subject to quantity of product required