

Size: Width - 8 x Height - 19.5 Inch

HANDLING AND STORAGE GUIDELINES

- In case any breakages in sheets are observed at the time of receipt, breakage details (size and number of sheets broken) must be mentioned on the LR copy containing the driver's signature.
- One photocopy of the LR is to be retained; the same must be shown at the time of breakage inspection by HIL's Quality Officer.
- Sheets must always be handled by a minimum of two people.
- Sheets must always be held by their ends and not their sides.
- Sheets must be lifted from the crown of corrugation, at once from both sides.
- Sheets must be stacked on firm, level ground, with 3-4 wooden blocks in place below.
- Pressure is never to be applied on one side of the sheet to raise the other - the sheet will break.
- Broken sheets must be stacked over each other, and not placed haphazardly.
- Do not stack long sheets over shorter ones; stack them separately.
- To avoid bottom breakages, don't stack more than 120 sheets together.
- Shade protection is recommended during long periods of storage.
- Sheets are to be placed in North-South orientation to avoid direct exposure to the Sun.
- Water is to be sprinkled on the sheets daily to avoid breakage during hot summers.
- Sheets are not to be transported along with other goods.
- Sheets are to be tied together firmly, ensuring they are protected at the points of contact, between the sheets and the rope with stuffing.
- Incorrect handling could result in damage, which may not be evident until the sheets are fixed.

ACCESSORIES

- Fitting Ridges (NK-2)
- Apron Pieces (NK-3)
- Barge Boards (ST-6)
- Serrated Ridges (NK-10)
- Ridge Finials (NK-11)

CAUTION

Asbestos Cement Products present no known risk to health as they contain only a small percentage of asbestos, firmly "locked-in" with cement during manufacture. Follow recommended work practices during installation to avoid emission of dust. Inhaling asbestos dust in excessive amounts over a prolonged period can be injurious to health.

RECOMMENDED WORK PRACTICES DURING INSTALLATION

1. To keep the dust level down, cutting and drilling operations must be carried out in the open, or well ventilated areas.
2. Use hand operated tools such as drill, hand-saw etc.
3. Use of pneumatic/electric power tools and abrasive discs is not recommended.
4. Any waste created during working operations should be collected, after damping, in impervious bags and buried underground.



The National Human Rights Commission has dismissed all health hazard concerns previously linked with the usage of Chrysotile Asbestos. Since 8th August, 2016, vide case no 2951/30/0/2011, Chrysotile Asbestos is considered safe when used under proper conditions.

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CK BIRLA GROUP

HIL

CHARMINAR



FIBRE CEMENT SHEETS



CM/L-XXXXXXX



Size: Width - 8 x Height - 19.5 Inch



Charminar Fibre Cement Sheets are made from an intimate mixture of fibre, Portland cement and binder. Fibre in these sheets acts as reinforcement in the same way as steel in RCC.

Charminar Fibre Cement Sheets are manufactured to exceed the requirements of strength specified in the relevant Indian standards.



STANDARDS

IS:459-1992 Specification of Corrugated and Semi-corrugated Cement Sheets.

IS:3007-1999 Code Of Practice for laying of Cement Sheets, Part-1, Corrugated Sheets, Part-2, Semi-Corrugated Sheets, IS-1626(P3) 1994-Roofing Fittings.

Fibre Cement Sheets are economical, non-combustible, robust, lightweight, easy to install, and resistant to both

corrosion and salty weather. These qualities make them an ideal building material for any requirement.

Fibre Cement Sheets have good thermal insulation properties and do not produce drumming sound during rain or hail storm.

TECHNICAL DATA

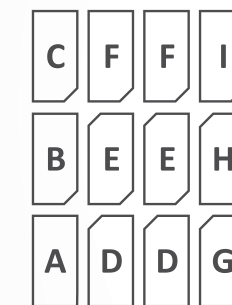
Nominal Lengths (in metres)	1.5	1.75	Actual Area covered* (allowing end lap and side lap)	3.0 metre long sheet	2.88 sq.m
	2.0	2.25			
	2.5	2.75			
	3.0	3.6			
Thickness (+free size/ -0.5mm)	6mm		Covering Efficiency* (allowing end lap and side lap)	3.0 metre long sheet	91%
	146mm				
Pitch of Corrugation	48mm		1.5 metre long sheet	87%	
Depth of Corrugation	1050mm				
Overall Width	1010mm		Approx. Weight per 10 sq. mts. covered:	3.0 metre long sheet	133 kg
Effective Width	1010mm				
Minimum end lap at Purlins (for slopes not less than 18°)	150mm		1.5 metre long sheet	140 kg	
Minimum Purlin spacing for Roofing	1.4m				Thermal Transmittance: "U" Value
Maximum rail spacing for Vertical Cladding	1.7m				
Maximum over hang unsupported	300mm		Colour	Natural Grey	
Running metres per ton(approx.)	79m				

Note: 1. Dimensions given above are subject to tolerances as per IS:459-1992
2. *Based on Code of Practice

THE BEST WAY OF USING THE CHARMINAR ROOF

- Smooth surface of the sheet should be facing upward.
- Never punch holes; drill them.
- Drill holes in the sheets that are at least 3 mm larger than fixing bolts.
- Be sure that sheets are mitered by cutting with a saw.
- Be sure that sheets are mitered correctly.
- Nuts should be screwed lightly first and tightened only after 13 or 14 sheets are laid.
- Tighten the nuts evenly, allowing the EDPM washer to merely seal the space between the holes and the bolts.
- Don't over tighten the nuts. Allow for the movement of structure.
- Don't exceed purlin spacing of 1.4 metre for roofing, and 1.7 metre for side claddings.
- Provide a purlin at every end lap.
- Don't exceed free overhang of 300mm at eaves.
- Distance between outlets in gutter line should not exceed 15 metre.
- Bolts are to be fixed only on the crown of the corrugation and not in the valley.
- Bolts are to pass through the second and the last corrugation of every sheet as shown in the figure.
- Do not fix bolts on the sheet at any point other than the one suggested.
- Cat ladders and safety belts must be used while working on the roof.
- Drilling on sheet must be done at least 75mm away from edge of the sheet.

MITERING PROCEDURE



FOR BOTTOM ROW:

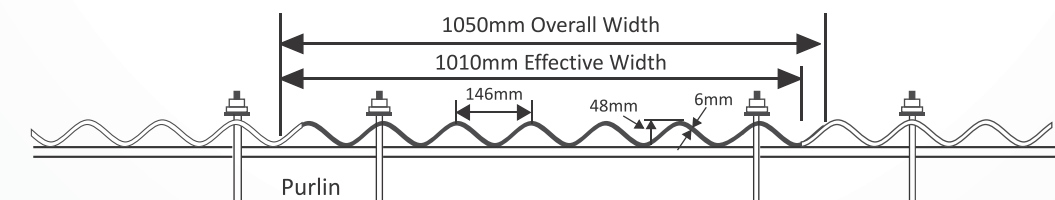
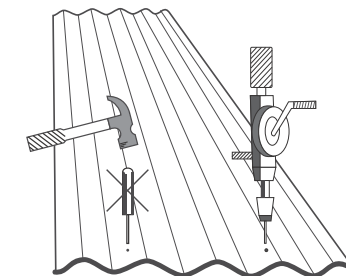
(A) First Sheet is uncut
D.D.G. – has top left hand corner out

FOR SECOND AND INTERMEDIATE ROW:

(B) First sheet right bottom corner is cut E, E both right corner and top left hand corner is cut.
(H) Last sheet only top left hand corner is out.

FOR TOP ROW:

C.F.F. sheets except last sheet, i.e.(I) has right hand bottom corner cut. Last sheet (I) is fixed uncut.



APPLICATIONS

Charminar Fibre Cement Sheets are an ideal building material for roofing and side cladding for:

- Industrial Buildings (all types)
- Food Storage Godowns
- Warehouses and Cold Storage Godowns
- Poultry Farms, Dairy Farms and Agricultural Sheds
- Garages, Verandahs and Outhouses
- Public Utility Sheds
- Cooling Towers
- Industrial buildings, houses, etc in coastal / hilly areas
- Cinema Halls
- Stadiums
- Railway & Bus Stations