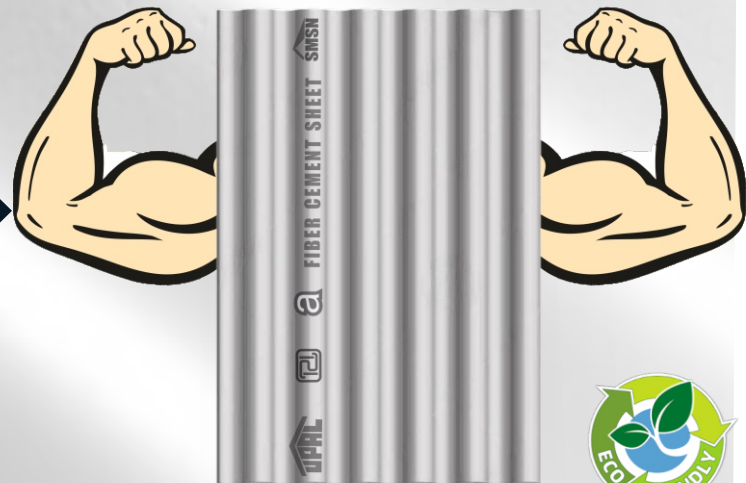




**FIBER CEMENT
ROOFING SHEET**



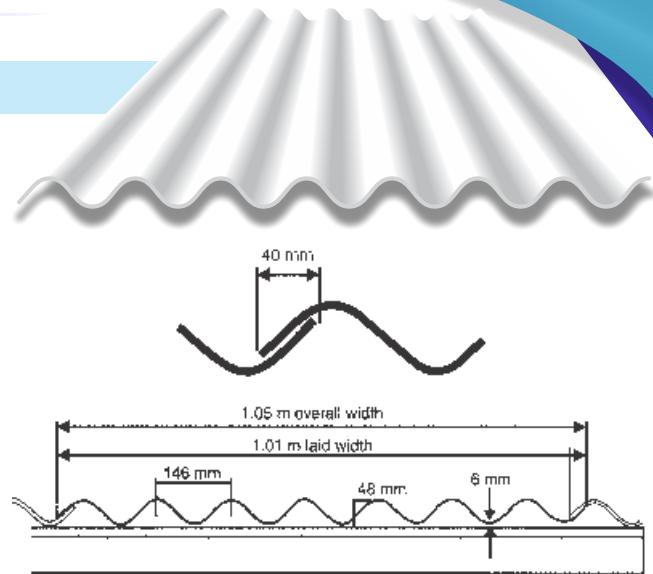
UPAL SHEET DIMENSIONS

UPAL CORRUGATED SHEETS

UPAL Roofing Sheet are manufactured from a quality blend of Fiber and Portland Cement, using the most modern manufacturing techniques and the latest process control equipments. UPAL Sheets far exceed the requirement specified in the relevant Indian Standards.

IS 459 - 1992	Specifications unreinforced corrugated and semi-corrugated asbestos cement sheets.
IS 3007 - 1969	Code of practice for laying of asbestos cement
Sheets - Part corrugated sheets. IS 730 - 1978	Specification for hooks & bolts for corrugated roofing sheets

UPAL Sheets are economical, non-corrosive, very strong, long lasting, fire-resistant and withstand extreme weather conditions. These qualities make UPAL sheets ideal for roofing and side cladding of industrial sheds, godowns, poultry sheds, houses etc.



FIXING DETAILS

Overall width	1050 mm.
Effective width	1010 mm,
Thickness	6 mm.
Pitch	146 mm.
Depth	48 mm.
colour	Natural Grey

Max. Purlin Spacing	1.4 mtr.
Max. rail spacing for side cladding	1.7 mtr.
Min. end lap (for slopes 18° & above)	150 mm.
Max. overhang, supported	300 mm.

FIXING ACCESSORIES TO USE AS PER : IS-3007

Standard Length (in Metres) :
1.5, 1.75, 2.0, 2.25, 2.5, 2.75, 3.0,

G. I. Hook	8 mm dia
Bitumen Washer	35 mm dia & 3 mm thick
G. I. Washer	25 mm dia & 1.6 mm thick

COVERING WIDTH (ALLOWING SIDE LAPES)

No of Sheets	Covering width in metres	No of Sheets	Covering width in metres	No of Sheets	Covering width in metres	No of Sheets	Covering width in metres
1	1.05	6	6.10	20	20.24	70	70.74
2	2.06	7	7.11	30	30.34	80	80.84
3	3.07	8	8.12	40	40.44	90	90.94
4	4.08	9	9.13	50	50.54	100	101.04
5	5.09	10	10.14	60	60.64	110	111.14

COVERING AREA

(allowing end & side laps)		
Lengths of the sheets	3.00 mtrs.	1.50 mtrs.
Actual area covered Covering	2.88 m ²	1.36 m ²
Covering Efficiency	91 %	87 %

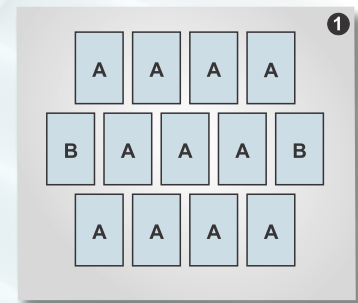
ROOFING ACCESSORIES

<p>NS / 10 SERRATED ADJUSTABLE RIDGE</p> <p>To close roof at ridge</p>	<p>NS / 9 NORTH LIGHT CURVE</p> <p>Used at the apex of the northlight roof to protect the glazing from sun / rain</p>	<p>NS / 3 APRON PIECE (120°)</p> <p>To cover the angle formed between slopping roof & wall or vertical cladding / glazing etc.</p>	<p>NHG 10 / 20 / 30 HALF ROUNDED GUTTER</p> <p>Used as Domestic gutters</p>	<p>NVG 10/ 20/ 30/ 40 VALLEY GUTTER</p> <p>Used as Industrial gutters</p>	<p>NEG 10/ 20/ 30/ 40 BOUNDARY WALL</p> <p>Used as Industrial gutters</p>
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JOINTING PROCEDURES

- 1) Before the actual laying of sheets is started, the purlin spacing and the length of the sheets should be checked to ensure that the arrangement of sheets will provide the end lap required and the specified overhang at the eaves and at the ridge
- 2) The sheets should be laid with the smooth side facing the sky and the side and end laps as given in Diagram
- 3) Asbestos Cement Corrugated Sheets are normally laid from left to right starting at the eaves

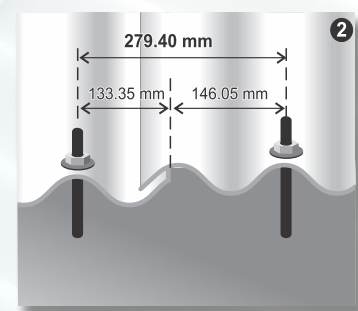
Depending Upon the prevailing direction of wind, if the sheets are laid from right to left, the whole procedure should be reversed



FIXING THE SHEETS

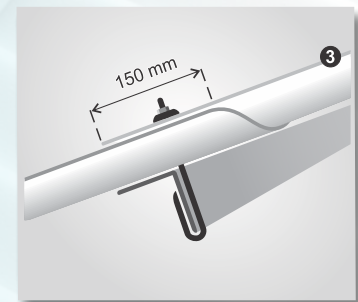
The sheets may be laid in staggered manner as follows. (Fig.1)

1. The First row of sheets (A), starting from eaves should be laid uncut
2. In the second row of sheets, the first sheet (B) is laid by staggering two-three corrugations, this offset can be cut of to make the verge of the sheet in one line.
3. The third row of sheets are laid similar to the first row.
Thus joints are automatically staggered.
There will be one bolt extra in staggered laps.
The top most layer of sheets, should be full width.

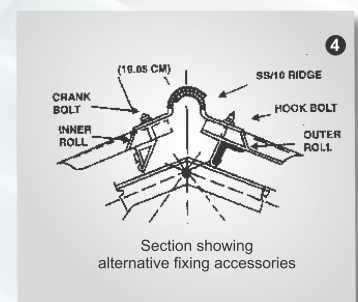


Where close fitting ridges and northlight curves are used

4. In this method of laying sheets care must be taken to ensure that only full width sheets are in the ridge or eaves level as the case may be.
5. The ends of all sheets at the eaves should be supported and the support should be placed as near the margin of the sheets as practicable. The maximum free overhang of the sheets at the eaves should not be more than 300mm.



At least 8mm diameter hook bolts, crank bolts or square head coach screws; should be inserted through 10mm diameter drilled holes on the crown of the corrugation. The hole should be covered by a bitumen washer (presently some more improved variety of soft washer are available in neoprene, PVC, rubber, PVC caps, etc.) touching the sheet, with the galvanised iron washer bearing on the other face and pressing the bitumen washer, when tightened by a galvanized iron nut or by the head of the coach screw.



- Use Catladders or safety belts.
- Walk along the line of the purlin only.



STRONG PROTECTION FROM HARSH WEATHER



COWSHED



GARAGE



WAREHOUSE



HOUSE



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