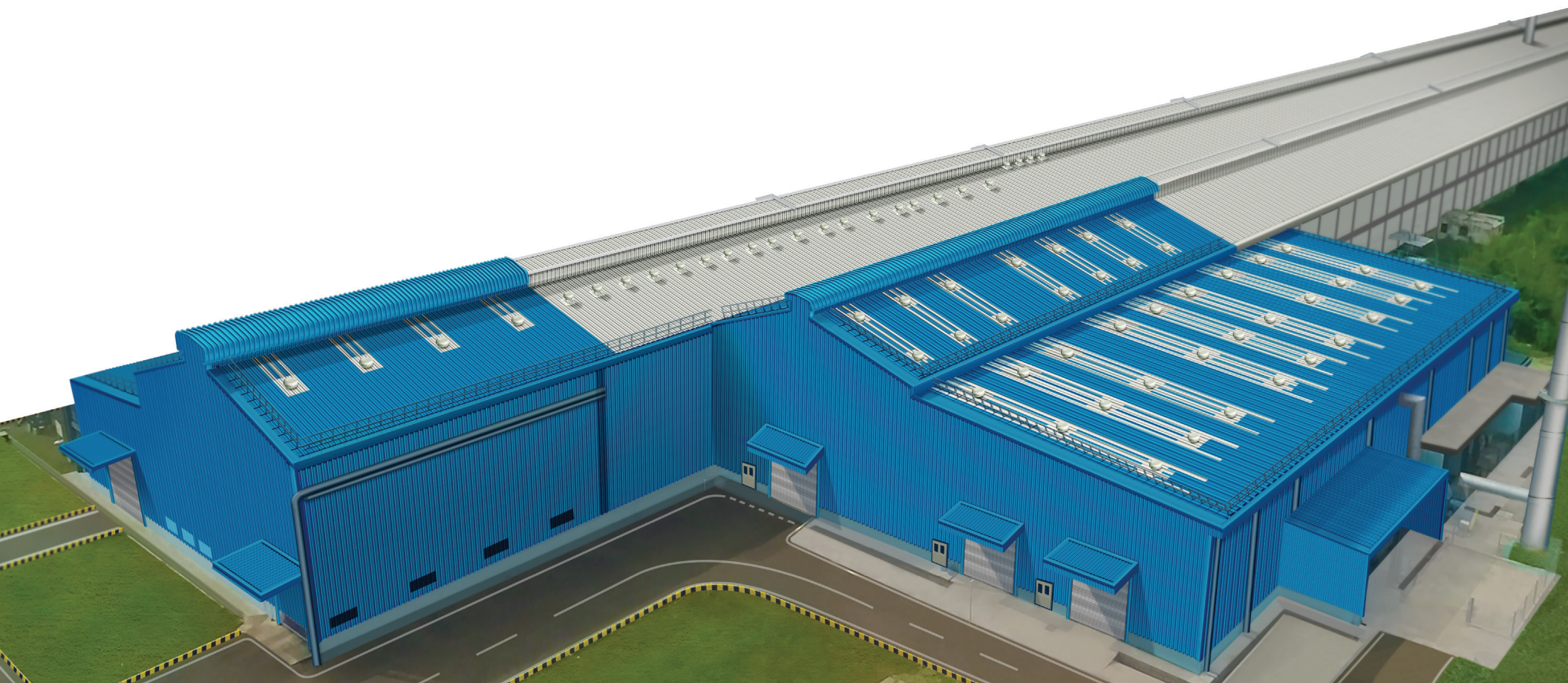




LET YOUR BUSINESS  
FLOURISH UNDER  
**HINDALCO EVERLAST.**



# ABOUT ADITYA BIRLA GROUP

A US \$ 48.3 billion Indian multinational corporation, Aditya Birla Group is in the league of Fortune 500 with a multicultural team of 1,20,000 people representing 42 nationalities. The Group’s operations are spread across 35 countries. Over 50 percent of the Aditya Birla Group’s revenues flow from its overseas operations.

## A GLOBAL MAJOR

- No. 1 in Aluminium Rolling
- No. 1 in viscose staple fibre
- No. 1 in carbon black
- The fourth largest producer of insulators
- Among the top 4 cement producers (outside China)

## AN INDIAN LEADER

- A top fashion (premium branded apparel) and lifestyle player
- The second largest player in viscose filament yarn
- The largest producer in the chlor-alkali sector
- A leading player in life insurance and asset management
- The largest manufacturer of grey cement, white cement and concrete
- Leading telecom service provider





## ABOUT HINDALCO

Hindalco Industries Limited, the metals flagship company of the Aditya Birla Group, is an industry leader in aluminium and copper.

A metals powerhouse with a consolidated turnover of over US \$ 18 billion, Hindalco is the world's largest aluminium rolling company and one of the biggest producers of primary aluminium in Asia. Its Copper smelter is the world's largest custom smelter at a single location.

In India, the company's aluminium units across the country encompass the gamut of operations from bauxite mining, alumina refining, coal mining, captive power plants and aluminium smelting to downstream rolling, extrusions and foils. Today, Hindalco ranks among the global aluminium majors as an integrated producer with a footprint in 9 countries outside India.





# HINDALCO EVERLAST KEEPS YOU WORRY-FREE

## LONG LIFE

Hindalco Everlast Aluminium Roofing Sheets can withstand the harshest of climatic conditions. These corrosion-resistant sheets (when used with aluminium alloy accessories) offer unmatched protection and peace of mind for a lifetime.

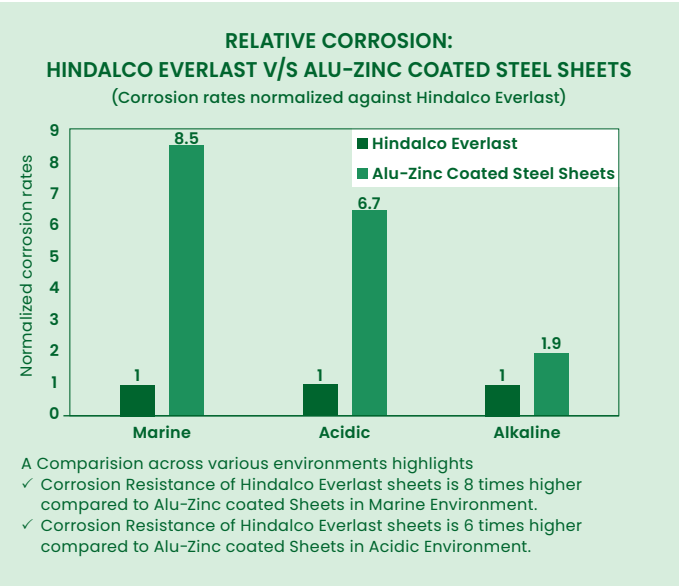
## LIGHT, BUT TOUGH

Hindalco Everlast Aluminium Roofing Sheets epitomize one of aluminium’s outstanding properties as a building material, due to their good strength yet being light. They are around half the weight of galvanized steel sheets and one seventh of standard cement sheets, making them easy to handle and install. These sheets can be easily installed on light supporting structures.

## EASY AND FAST FABRICATION

Structures using Hindalco Everlast can be transported and erected with ease. Since aluminium is not brittle, Hindalco Everlast Aluminium Roofing Sheets do not break or crack during or after erection.

**CORROSION RESISTANCE; 100% RUST-PROOF**  
Hindalco Everlast Aluminium Roofing Sheets are made from 100% virgin aluminium which never rusts. They are widely used in aggressive and corrosive environments in preference to galvanized steel.



Note: Based on in-house testing conducted with 0.6M NaCl, 0.1% H2SO4 having pH 1.92 and pH10 NaOH, as per Corrosion of Aluminium by Christian Vargel.

## LOOK NEW FOREVER

Due to their anti-corrosive property, Hindalco Everlast Aluminium Roofing Sheets looks good forever. This feature ensures you get a unique combination of everlasting protection and great aesthetic appeal.

## HEAT TRANSFER

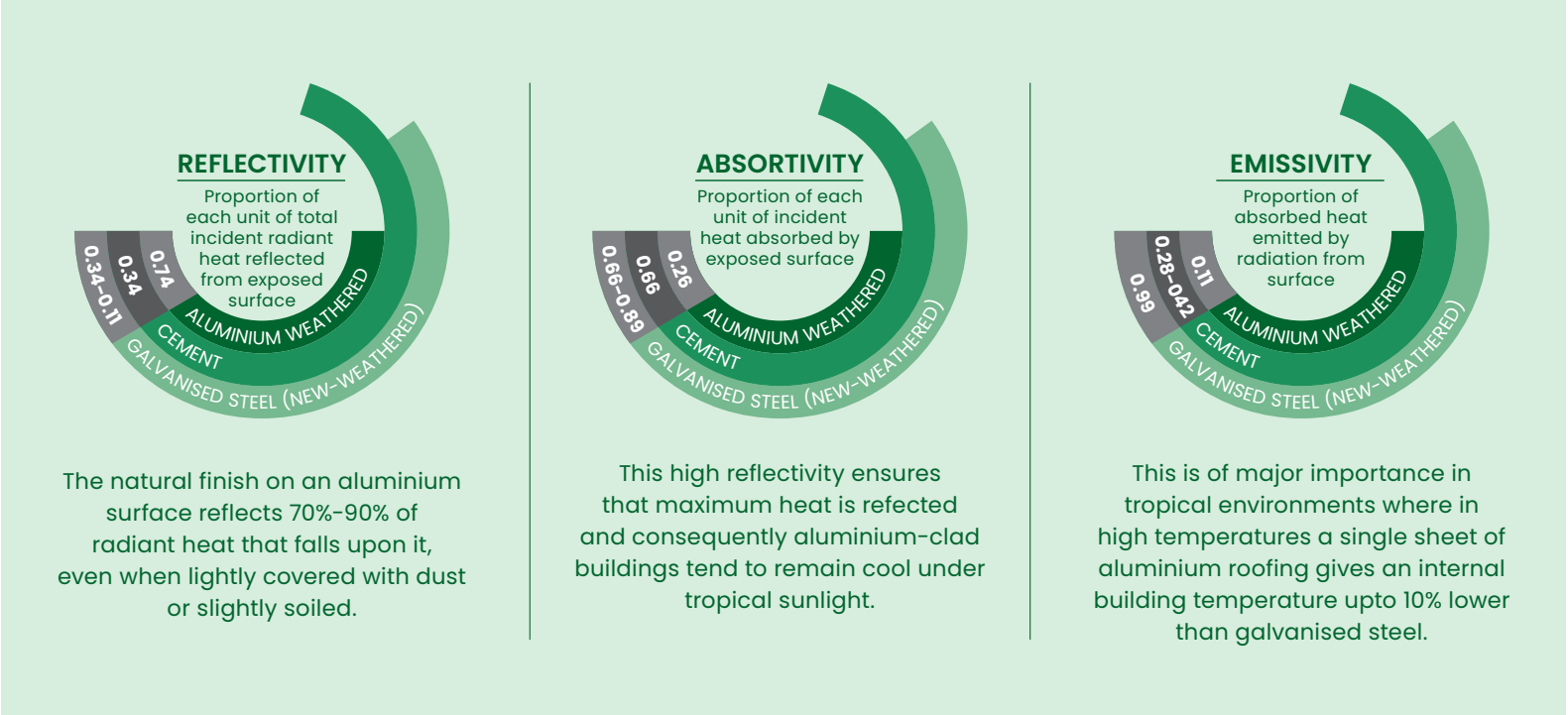
Heat is transferred by conduction, convention and radiation. Hindalco Everlast has a very high reflectivity of approximately 70% to 90%, depending on degree of oxidation of surface. Installations have demonstrated that thermal radiation in a hot day under an uninsulated aluminium roof is less than other roof decks, resulting in greater personal comfort.







# THE COOL FACTOR



## FIRE RESISTANCE

Hindalco Everlast Aluminium Roofing Sheets are non-combustible and non-flammable. They are also non-sparking as per BS476.

## HIGH RESALE VALUE

Even after years of usage, Hindalco Everlast Aluminium Roofing Sheets don't lose their value. They have high end-of-life resale value - up to 60% of the value of the prevailing metal price.

## NO HEALTH HAZARDS

Premises intended for the storage, handling and preparation of food & beverages demand non-toxic, non-absorbent and clean surfaces. Hindalco Everlast Aluminium Roofing Sheets satisfy all these requirements, and are hence preferred. Moreover, Hindalco Everlast is also devoid of bacterial and fungus infections.








## GREEN METAL

Aluminium is a green metal that's extremely eco-friendly. It's endlessly recyclable with no loss in quality.





# THE HINDALCO EVERLAST ALUMINIUM ROOFING AND CLADDING BENEFITS

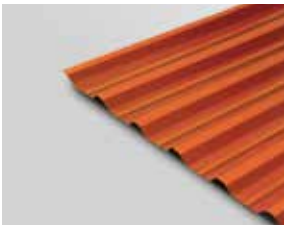
FEATURES	HINDALCO EVERLAST ALUMINIUM SHEETS	G.I./COLOUR G.I. SHEETS	ALU-ZINC COATED SHEETS
 RUST PROOF	Yes	No	No
 ZERO MAINTENANCE	Yes	No	No
 STRENGTH & WEIGHT	Strong but one third the weight of G.I.	Strong	Strong
 LOOKS GOOD	Looks good forever	Only in initial years	Only in initial years
 TEMPERATURE	Reflects heat. Moderates temperature below roof up to 6° due to lower emissivity	Absorbs heat. Higher temperature below the roof due to higher emissivity	Absorbs heat. Higher temperature below the roof due to higher emissivity.
 LIFESPAN <small>Under normal natural atmospheric conditions</small>	Over 40 years	5-8 years	8 -12 years
 RESALE VALUE	Up to 60% of initial investment	Very low	Very low



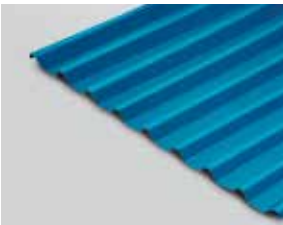


# VERSATILITY IN EVERY ASPECT

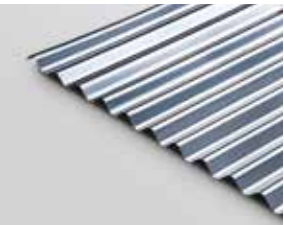
## RANGE OF PROFILES AND COLOURS



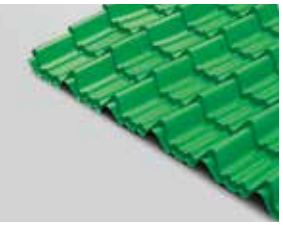
Modern Troughed Sheets



Troughed Sheets



Circular Corrugated Sheets



Tiled Profile Sheets



Hi-Crest Sheets

## RANGE OF COLOURS\*



Shiny Silver



Snow White



Evergreen



Royal Blue



Brick Red



Emerald Green



Coffee Brown



Cloudy Grey

Note: \*Profiles available in other RAL shades also, subject to prior confirmation.

### TYPICAL PROPERTIES

**Alloys:** Hindalco Everlast roofing sheets are made from alloys having chemical composition as per IS 737-2008

**Thickness:** Hindalco Everlast Aluminium Sheets are available in thickness varying from 0.40 mm to 1.60 mm.

**Length:** Hindalco Everlast Aluminium Sheets are available in lengths between 1500 mm and 6500 mm. Other lengths can be provided on request.

### YOUNG’S MODULUS

Young’s Modulus or Modulus of Elasticity for Aluminium is 7.0 x 104 MPa.

### YIELD STRENGTH

Minimum yield strength offered is 160 MPa for AA3105H18.

### COEFFICIENT OF LINEAR THERMAL EXPANSION

Coefficient of linear thermal expansion for aluminium (20°C-100°C) is 23.21 x 10-6 per degree centigrade.

### WORKABILITY

Everlast Aluminium Sheets can be bent to required shape, subject to applicable bend radii for the alloy.

### TYPICAL WELDABILITY

Gas (Oxy-Acetylene) – Excellent  
Arc (TIG-MIG) – Excellent  
Resistance (Spot, Seam, Stud) – Excellent



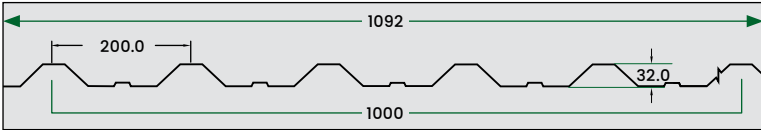


# PRODUCT – TECHNICAL DETAILS

## A. Modern Troughed (Trapezoidal) Sheets

Width: 1092 mm

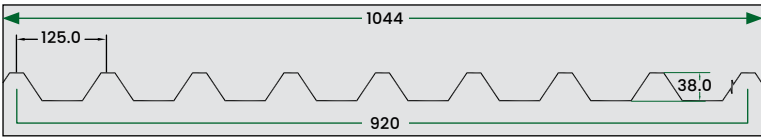
Thickness	Weight of Sheet (Kg.)	
	Per Sq. Mtr Sheet	Per Mtr Length
0.71	2.18	2.39
0.65	2.00	2.19
0.56	1.71	1.88
0.46	1.41	1.55
0.40	1.23	1.34



## B. Troughed (Trapezoidal) Sheets

Width: 920 mm and 1044 mm

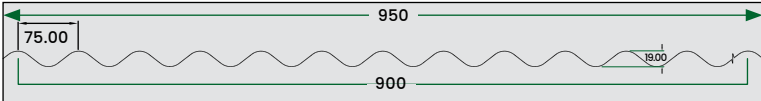
Thickness	Weight of Sheet (Kg.)		
	Per Sq. Mtr Sheet	Per Mtr Length	
(mm)		7/125 (920 mm)	8/125 (1044 mm)
1.22	4.33	3.97	4.50
0.91	3.23	2.96	3.36
0.71	2.50	2.31	2.62
0.65	2.31	2.12	2.41
0.56	1.96	1.82	2.07
0.50	1.77	1.63	1.85



## C. Circular (Sinusoidal) Corrugated Sheets

Width: 800 mm, 950 mm and 1250 mm

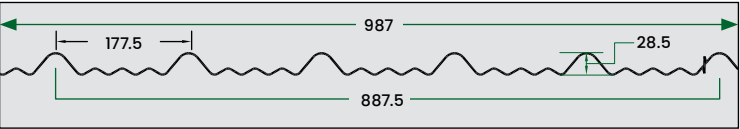
Thickness	Weight of Sheet (Kg.)		
	Per Sq. Mtr Sheet	Per Mtr Length	
(mm)		16/75 (1250 mm)	12/75 (950 mm)
1.22	3.72	4.71	3.66
0.91	2.77	3.51	2.68
0.71	2.14	2.74	2.09
0.65	1.98	2.47	1.89
0.56	1.68	2.15	1.65
0.50	1.52	1.91	1.43
0.35	1.07	1.32	1.02



## D. Tiled Profile Sheets

Width: 987 mm

Thickness	Weight of Sheet (Kg.)	
	Per Sq. Mtr Sheet	Per Mtr Length
(mm)		
0.71	2.35	2.32
0.56	1.83	1.81
0.50	1.65	1.63

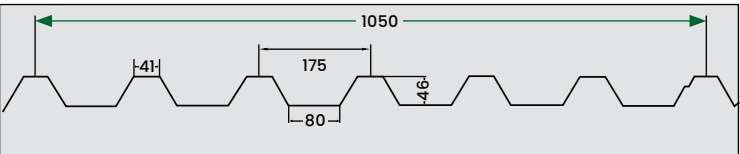


## E. Hi-Crest Sheets

Width: 1144 mm



Thickness	Weight of Sheet (Kg.)	
	Per Sq. Mtr Sheet	Per Mtr Length
(mm)		
1	3.57	4.09
0.91	3.25	3.72
0.71	2.54	2.90
0.65	2.32	2.66
0.56	2.00	2.29



Note: 1) Per unit weight may increase up to 3% in case of colour coated sheets.  
2) All figures are indicative only.

Conformance to Indian Standards	Schedule of Rates (SOR) of Govt. Bodies
Profile Dimensions of the Troughed (B) and Corrugated (C) sheets are as per IS 1254-2007  Compliance to chemical composition & mechanical properties as per IS 737-2008	Hindalco Everlast sheets qualify the SOR of • CPWD • Several state PWDs • Indian Railways • Engineers India Limited





# SITE INSTRUCTIONS

## TRANSPORTATION

### DOS

- Do provide cushion with straw/thick tarpaulin on truck bed, before loading the roofing sheet during transportation, to avoid punching effect from projected bolts/nails.
- Do cover sheets with tarpaulin to ensure proof against rainwater while in transit. (Rainwater if entrapped between sheets may leave stain marks)

### DON'TS

- Don't load/unload or keep heavy material on top of roofing sheets.
- Don't drop from a height.
- Don't carry or deliver cement/fertilizer/any form of alkali, with aluminium roofing sheet. This may cause the sheet to get corroded.

## HANDLING & STORAGE

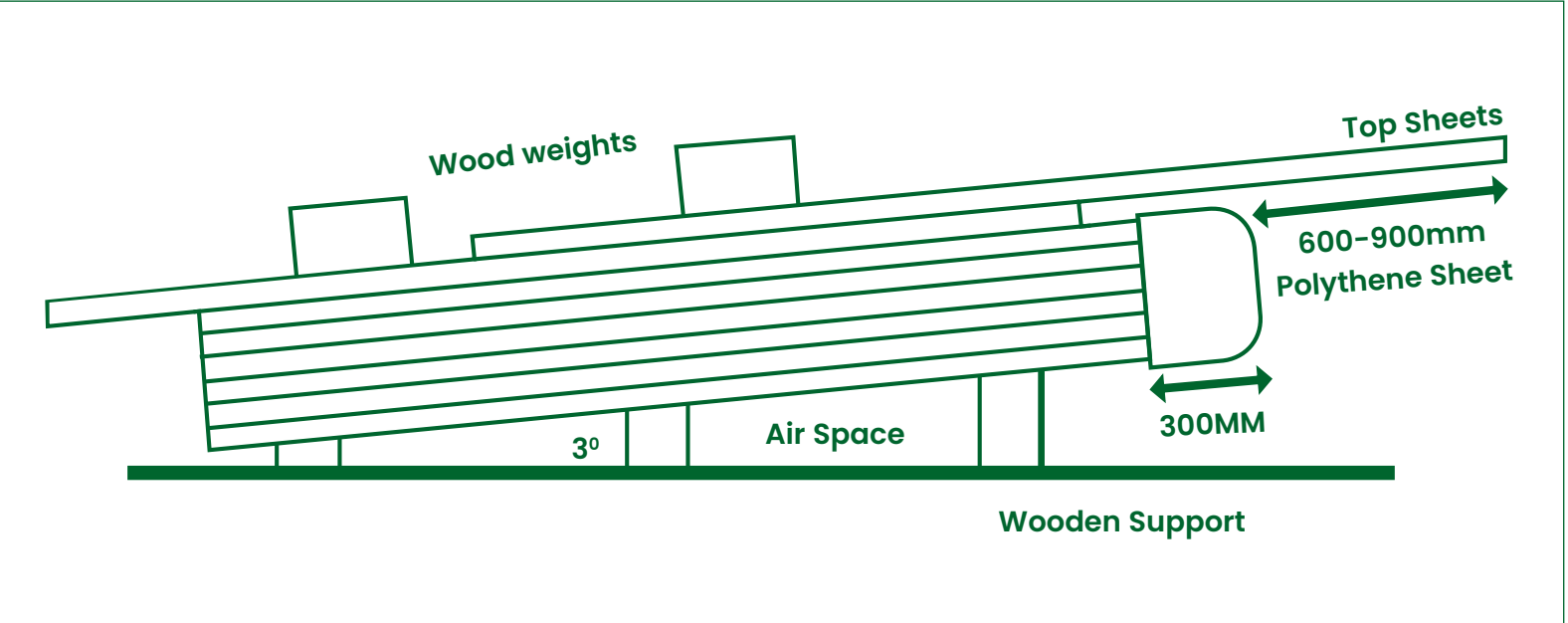
Hindalco Everlast Aluminium Roofing Sheets are quality products. Adequate care should be taken in storing and handling.

- When received, the sheets should be kept under dry circumstances and stored under cover until used.
- Appropriate measures should be taken to prevent moisture between the sheets to avoid staining of the sheets.
- Sheets that have become wet during transport are to be unpacked and dried immediately before restacking.
- Should the Sheets be kept in the open, they should be stored in its original packing and be stacked in an inclined position of minimum 3° with an air space and polythene sheets separating them.

### IF THE ORIGINAL PACKING HAS BEEN OPENED, STORE THE SHEETS AS FOLLOWS:

- Extend the top sheet 600mm to 900mm towards the higher end and the second sheet almost to the floor.
- The higher end of the pack comprising the third and subsequent sheet should be well wrapped in polythene sheets across the complete width and extending 300 mm down the length of the pack.





### WALKWAY & NOTICES

Irrespective of the thickness of the sheets crawl boards, walkways or roofing ladders should be used to avoid damage to the roof.

While walking on the roof, evenly distribute body weight over the soles of the feet trying not to concentrate weight on heel or toes. Soft soled shoes should be worn. Walk along supports when walking across the sheet and be careful when moving between supports.

### CLEANING UP

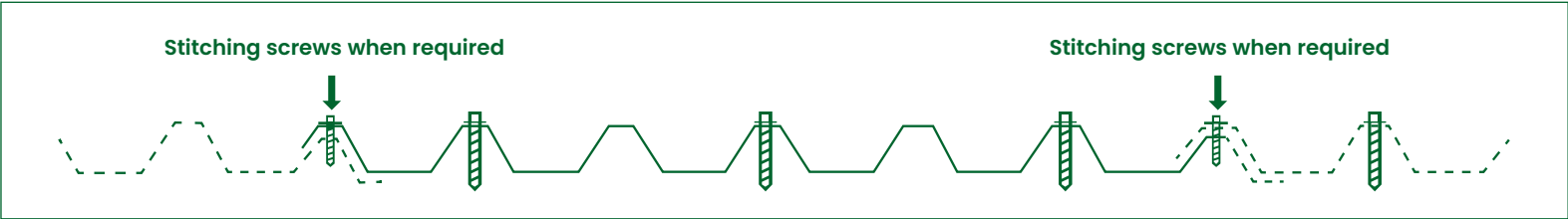
On completion of installation, sweep the roof clean with a soft broom, taking care to remove all steel nails, scraps or copper or lead, fillings, pop rivet stems, muddy footprints, etc., which are likely to promote staining or corrosion of the roof surface.



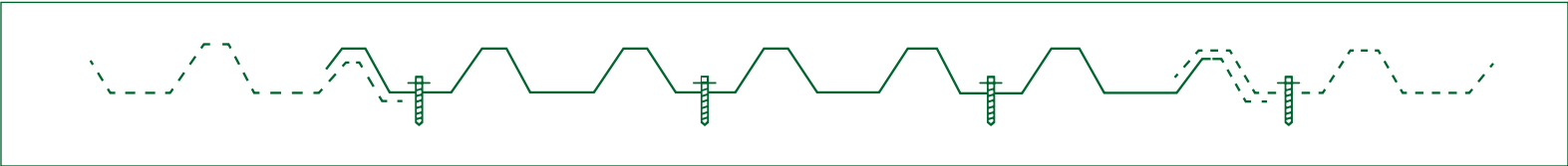


# INSTALLATION

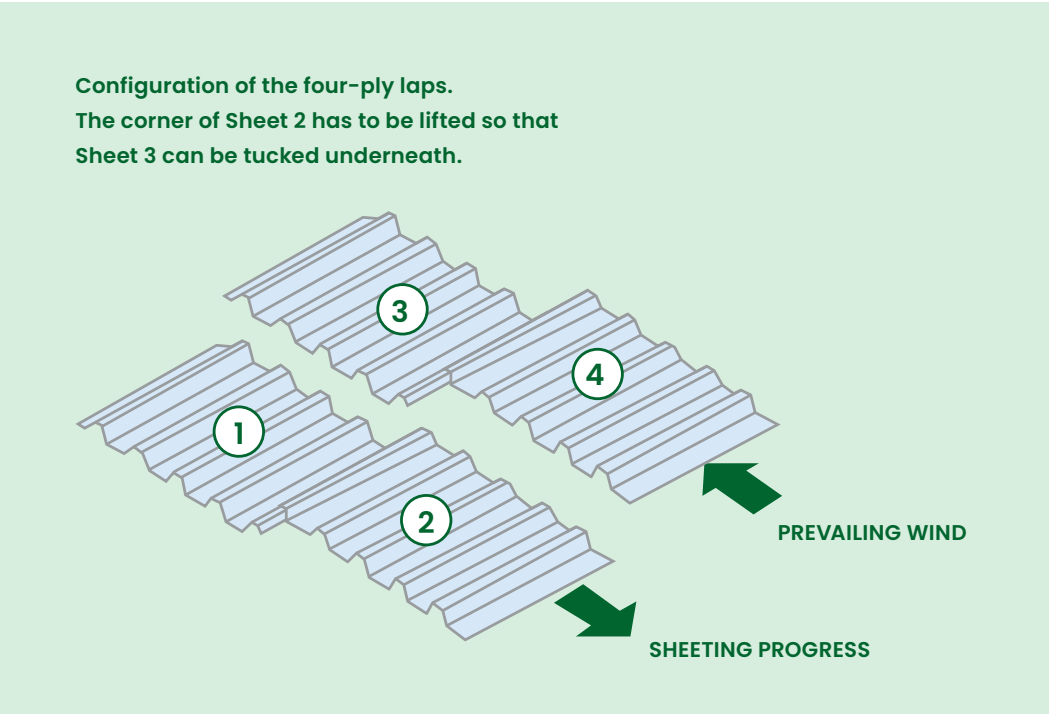
FIXING – PURLIN FASTENER FOR ROOFING



VALLEY FIXING PATTERN (RECOMMENDED FOR WALL CLADDING)



# INSTALLATION INFORMATION







**PREPARATION**

Before laying the sheets, consideration should be given to the installation of gutter and eave flashing, insulation and the location of roof penetrations such as vents, skylights, etc. If insulation is to be laid on the wire mesh, it should be laid first with the gutter and eave flashing following to secure the wire at the eave. Insulation should be laid with the roofing to avoid the possibility of rain wetting insulation.

**SHEET CUTTING DRILLING**

Aluminium is best cut with lubricated fine tooth circular saw. All holes must be drilled and not puncture. Care nuts be taken to avoid distortion of the short profile.

**SHEET INSTALLATION**

Customary practice is to lay out an area of sheet and secure each sheet with a crest fastener at the center of the ends of the middle, at the same time checking the profile with a scalloped ridge flashing to avoid profile spread. The area of sheet laid out should be no more than that which can be fully fixed within the day of laying. When the area of sheet has been laid, install side lap fasteners and then the balance of crest fasteners.

Wherever possible commence laying the sheet, farthest from the expected direction of the heaviest rain or wind and from the eaves toward

the ridge. The top end of the sheet should be not more than 100m from the ridge or fascia line and the bottom end should extend 50mm into the gutter. The ridge and eave ends are to have the pans upturned and downturned respectively. End forming tools are available for this purpose.

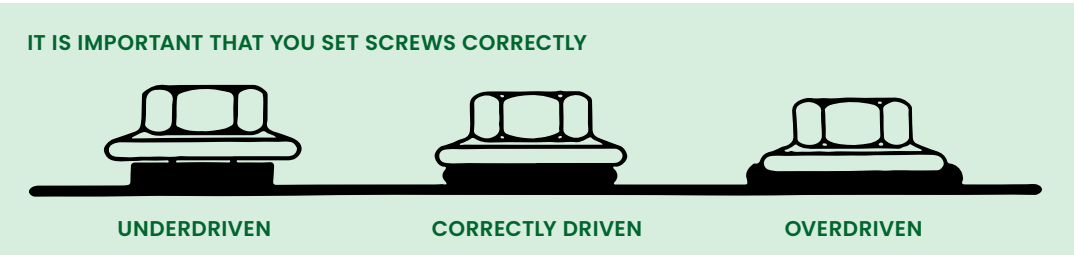
Roof slopes greater than 25° require side lap sealing, with a continuous run of silicone sealant.

**SQUARENESS**

Check the roof or wall structure for squareness before commencing to lay sheet. Sheet must be laid square to the ridge wherever practical. Any sag of purlins should be corrected before commencement particularly on low pitch roofs to avoid water “ponding”.

**WALL CLADDING**

Wherever possible commence fixing farthest from the expected direction of the heaviest wind or rain. Where more than one length is used for the wall height, an overlap of 100m should be allowed at a girt with the upper sheet overlapping the lower as for roofing end laps.







#### SEALANTS

Silicone sealants used with aluminium sheeting must be neutral cure. Neutral cure silicone sealants have good adhesion to the clean surface of all our roofing.

#### DISSIMILAR MATERIALS

Under no circumstances should copper, brass, or copper alloys be placed in contact with aluminium or water runoff from these metals discharge on to aluminium sheet.

Care must be taken to avoid contact with building materials such as unseasoned or chemically treated timber, lime cement, concrete, mortar or plaster during construction and to provide impermeable barriers against long term contact.

In marine, moist or aggressive environments the face of steel or chemically impregnated timber purlins, against which the sheeting is fastened, is to be painted with chromate based primers, bituminous paint or coated with adhesive P.V.C. tape.

Under severe marine and/or aggressive industrial environments Denso tape or closed cell polyethylene tape should be used to completely fill the sheet/structure interface to avoid moisture retention by capillary action.

Another common practice is laying of foil bound insulation over the purlins so as to isolate them from the sheets.

#### CYCLONE PROTECTION

To avoid the roofing sheets from blowing away it is advised to use storm washers made of aluminium at all the ends including ridges and eaves.

#### ACOUSTICS

Rain can cause noise problems on all sheet metal roofs. Noise levels can be substantially reduced by the application of a non-metallic separator between the roofing sheets & purlins.

#### CONDENSATION

Condensation is a natural phenomenon in which water droplets are formed on the under-side of any metal roofing sheet. It may occur when the temperature of the sheet is lower than the temperature of the air below the roof, causing the moisture in the air to condense on the underside of the metal roof. This is a natural phenomenon, hence no claims will be entertained by Hindalco in this regard.

The risk from condensation can be minimized by providing proper ventilation in the roofs and by using suitable insulation material.





## OUR ELITE CUSTOMERS

Hindalco Everlast boasts of an elite list of clients from multiple segments. Some of them include:

- Reliance Industries
- Hotel Taj
- Grasim Industries Ltd.
- Jain Irrigation
- Lafarge Cements
- JK White Cements
- Indian Oil
- NALCO
- UltraTech Cement
- TATA Motors
- Godrej
- HCC
- Indian Railways
- Essar Steel
- Raymond
- Welspun
- National Thermal Power Corporation
- Rashtriya Chemicals and Fertilizers Ltd.
- Gujarat State Fertilizers
- Vedanta
- ABB
- Asahi India Glass Ltd.
- Larsen & Toubro
- PepsiCo
- Hindustan Unilever
- Siemens
- Sandvik Asia
- Allana Foods Pvt. Ltd.

**And many more...**



RAILWAY PLATFORMS & WORKSHOPS



Hindalco Everlast Sheets have been installed at multiple locations:

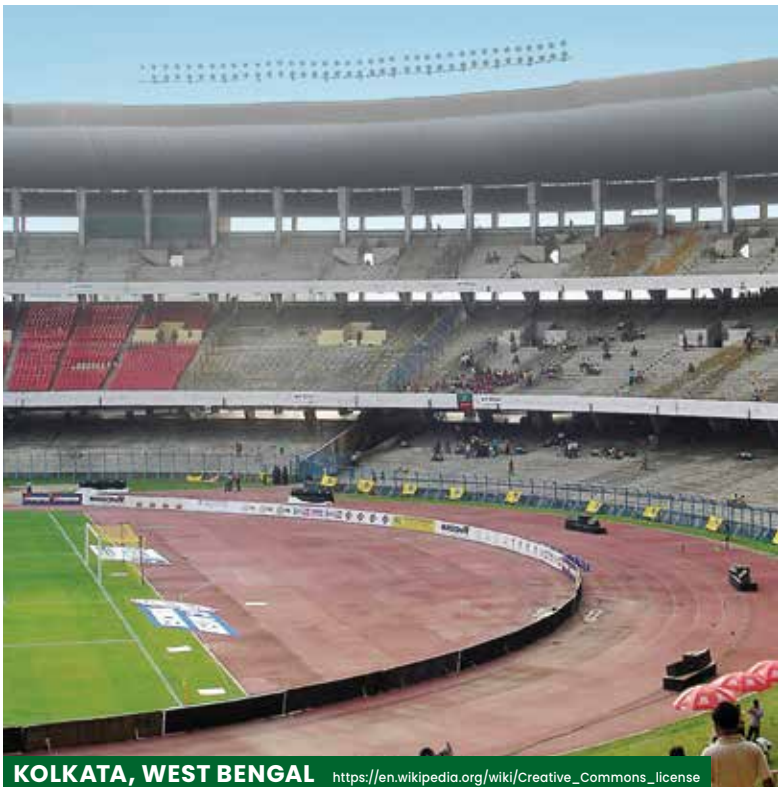
RAILWAY PLATFORMS AND FOBS

- Mumbai- Churchgate, Dadar, Andheri, Borivali, Bandra, Goregaon, CSMT, Ghatkopar • Thane, Maharashtra
- Allahabad, UP • Kanpur, UP • Agra, UP • Varanasi, UP
- Mughalsarai, UP • Sagar, MP • Jabalpur, MP • Itarsi, MP
- Ahmedabad, Gujarat • Surat, Gujarat
- Vadodara, Gujarat • Rewari, Haryana • Kota, Rajasthan
- Gwailor FOB, MP • Nagpur FOB, Maharashtra

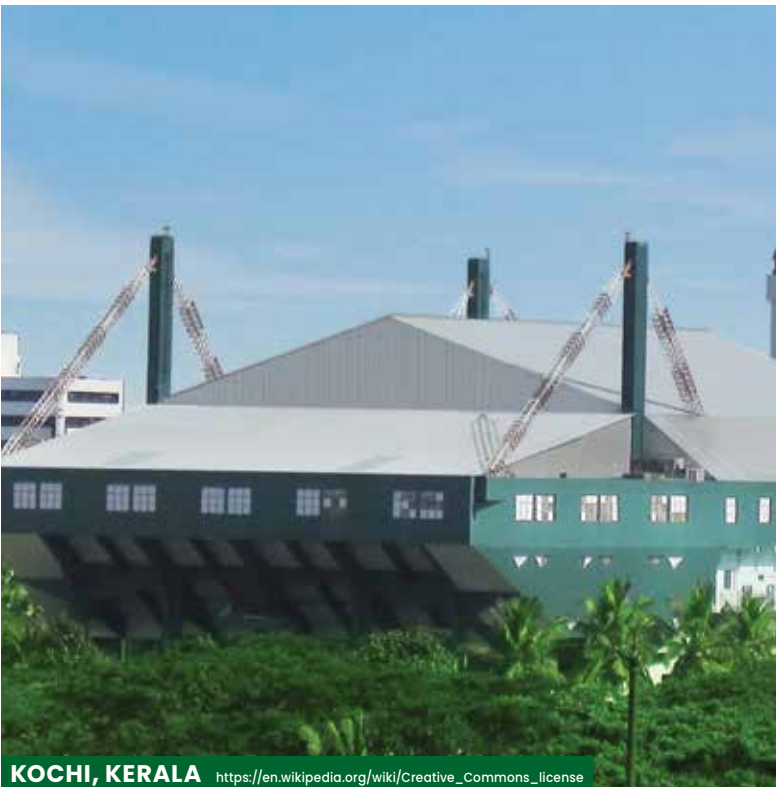
RAILWAY WORKSHOPS & LOCO SHEDS

- Mechanical Workshop, Bareilly, UP • Harnaut, Patna, Bihar
- Ajmer Loco Shed, Rajasthan • Diesel Locomotive Shed, Varanasi, UP
- Sonpur Loco Shed, Patna, Bihar • Jamalpur Loco Shed, Bihar
- Katni Loco Shed, MP • Jodhpur Loco Shed, Rajasthan
- Diesel Loco Modernisation Works, Patiala, Punjab
- Juee Nagar Car Shed, Navi Mumbai, Maharashtra
- Sabarmati Loco Shed, Gujarat • Yelahanka Wheel Factory, Karnataka
- Dahod Railway Workshop, Gujarat • Bhavnagar Workshop, Gujarat
- Mahalakshmi Car Shed, Maharashtra • Nagpur DRM Office, Maharashtra
- RCF Kapurthala, Punjab

STADIUMS



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KOCHI, KERALA [https://en.wikipedia.org/wiki/Creative\\_Commons\\_license](https://en.wikipedia.org/wiki/Creative_Commons_license)



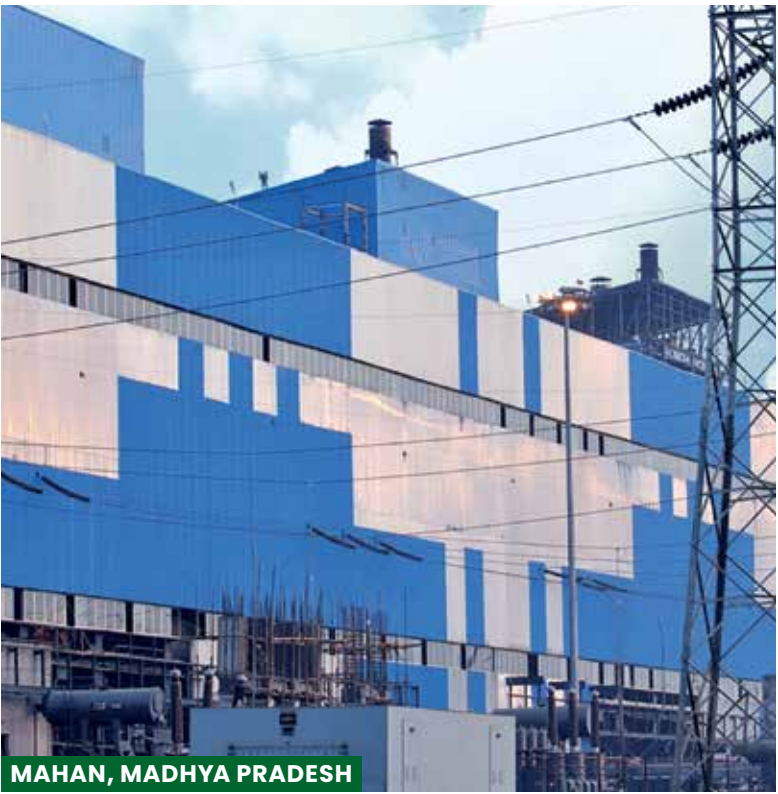
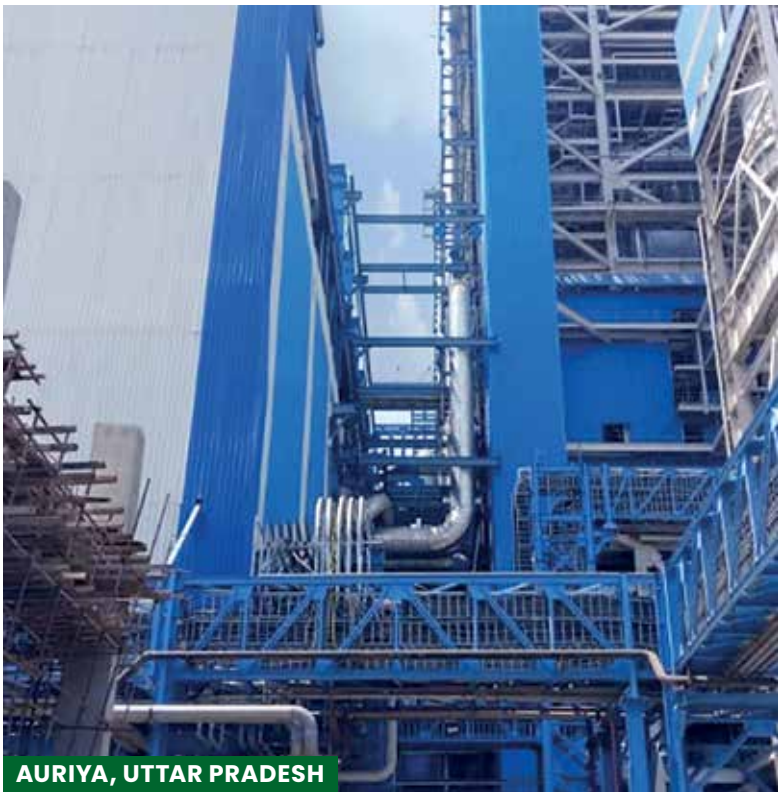
BHUBANESWAR, ODISHA



SOLAR ROOF TOPS

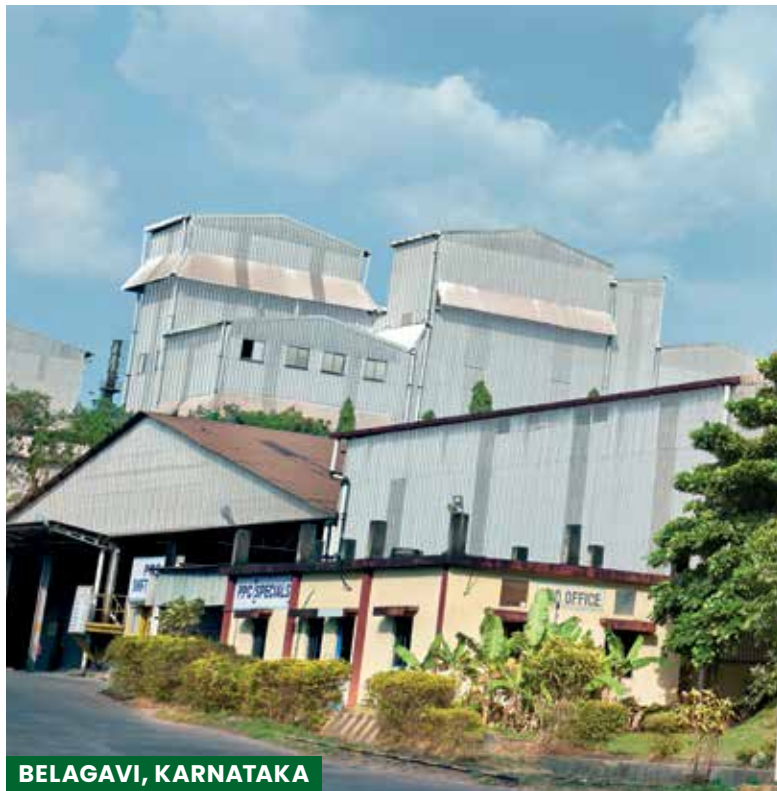


POWER PLANTS





CHEMICALS & FERTILIZERS



FOUNDRY AND FORGE (STEEL)







## MARKETING AND REGISTERED OFFICE

Ahura Centre, B-Wing, 1st Floor,  
82 Mahakali Caves Road, Andheri (East),  
Mumbai 400 093 Tel: +91-6691 7000/7068

## REGIONAL OFFICES

### NORTH

Mindmill Corporate Compound,  
5th floor, 24A, Film City, Sector 16A,  
Noida (UP) 261 301. Tel: 0120-669 2100

### SOUTH

7th Floor, Indusrty House, 45 Race  
Course Road, Bengaluru 560 001.  
Tel: +91-80 4041 6100/6035  
090719 62220

Alupuram Works, P. B. No. 30,  
Kalamaserry, Kerala 683 104.  
Tel: +91-484-2532 2497, 098474 46222

Flat No. 2/A, 2nd Floor, Apex Plaza,  
3 Nungambakkam High Road,  
Chennai 600 034.  
Tel: +91-44 2827 2333/43/63  
090877 28595

### EAST

Jeevan Deep Building, 1, Prafulla  
Chandra Sen Sarani, Kolkata 700 071.  
Tel: +91-33 2280 9710, 098319 62197

### WEST

Ahura Centre, B-Wing, 1st Floor,  
82 Mahakali Caves Road,  
Andheri (East), Mumbai 400 093.  
Tel: +91-22-6691 7000/7068,  
097681 48224