

## FRP (GRP)

ROOFING AND CLADDING SHEETS AND MOULDED PRODUCTS









FRP (GRP)
ULTIMATE
SOLUTION FOR
INDUSTRIAL
ROOFING
AND
CLADDING











## FRP/GRP PANEL PRODUCTION LINE WITH AUTOMATIC GEL COATING

COMPOSITE

# **IDEAS**

FOR INDUSTRIAL SKYLIGHTS
CHEMICAL RESISTANCE
ROOFING, CLADDING PANELS,
PUF PANEL MODULAR SOLUTION

# More than 500 Corporate Clients

Vast Experience in Business

**Best Value Products** 

Reliable & Secure

**Eco Friendly** 

## LEADING FROM THE FRONT

Everest Composites Pvt. Ltd. (ECPL) is involved in the manufacturing of building construction products since 1991. ECPL is known for its strong technological capability, scalability and adaptability that are required to meet the constantly changing prerequisites of client.

Leveraging its industry expertise, stringent standards and driven workforce, ECPL delivers unmatched services & quality products. This has made Everest Composites innovative pioneer and leader in the industry.

## VISION Continued Competency

To establish ECPL as a leading & world-class manufacturer & supplier of innovative, cost-effective, high-quality products through continued technological innovation and competent manufacturing strategies.

### MISSION Innovative and Reliable

To deliver greater value, reliability, exceptional quality and economical solutions through consistent innovation & become a market leader in composite materials.

## **OUALITY** You Can Trust

Our customer-centric performance driven & growth oriented quality management techniques extend beyond the range of products to encompass a broader spectrum of services.







- 1992 Started selling products to the medium scale Industries
- 1993 Started the production of FRP/GRP plain sheet & expanded the network in Gujarat.
- 1995 Started the production of FRP/GRP door & frame, single piece dome industrial products







- 1998 Started branch office South Gujarat and Surat for better services
- 2000 Company acquired land of 30,000 Sq. ft with 6000 St. Ft. Factory at Manjusar.
- Prestigious order from Reliance supplied 10.36 Mt long sheets.
- Started marketing network for major projects in over all India.





- 2001 2003 We have supplied approx 20,000 slide (play ground equipment) in entire Gujarat & 75,000 Nos. FRP/GRP Sheet to L&T as replacements of class.
- 2004 Introduced new product Glass Reinforced Plastic (GRC), we got technical assistance and training from M/s. Saint Gobain Vetrotx Ltd.
- Entered into real estate
   Business Under name
   "SUN CITY".They started a
   prestigious housing complex
   at Manjalpur Vadodara





- 2007 an ISO 9001:2000 Certif
- 2007 Started manufacturing Poly Urethane Foam (PUF) First order BTS unit FRP/PPGI PUF panel for telecom
- 2008 Started the production of FRP plain sheet.
- 2009 Established Unit-2 with various productsat -Lamdapura.
- 2010 Converted manual Process to machinery process for GRC by Purchase Machine from Singapore





- ◆ 2011 We Started Sokhada Unit and Purchased new FRP fully automatic machi<u>ne CLM</u>
- 2012 Established New Unit and purchased new machine for production capacity at Lamdapura
- ◆ 2012 New Product Launched
- ◆ 2013 Successfully completed G+1 Labour Colony at Reliance industry ltd. DAHEJ
- 2014 Automatic Spray-Up plant for Mouldings
- → 2015 EPS Coated Decorative Mouldings







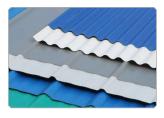




## **MACHINE MAKE FRP/GRP SKY LIGHT PANELS**

Everlight skylight is an excellent substitute for conventional cheaper & poor quality FRP/GRP sheets and also for the expensive polycarbonate sheets. Everlight is durable and proves as a "Value For Money" product in the long run.

- Everlight roofing & side cladding system
- Available in different shapes, profiles & colours
- Translucent non-glare and crinkle-diffused sheets
- ◆ Industrial Building & warehouse.
- Fire Retardant
- Natural Light Saves Electricity Cost





Description	Machine Made FRP/GRP Sheet.					
Brand	Everlight / LifeGuard	Resin	RL UV / G.P / Isophthalic / Vinylester /			
			Epoxy / Phenolic			
Model	Any type	Fiber Glass	Greater than 30%			
Color	As required	Gel Coat	Top side with any resin (Dep. Appl.)			
Width	1450mm(Stretch)	Warranty	10-15 years (Dep. Specification & thk)			
Length	No restriction					
Thickness	1-6mm	Unit Price	Depends specification and thickenss			
Unit Weight	Depend on type	MOC	1000 Sq.mtr			
Tolerance	+ or - 10%					
Capacity	50,000 Sq.mtr / month					

Physical Properties							
Barcol Hardness	Minimum 40	Standard	IS:12866				
Tensile Test	Minimum 7,000 PSI	Standard	ASTM				
Flextural Strength Test	Minimum 14,000 PSI	Standard	ASTM				
Density	1.4 to 1.6	Standard	IS:12866				
Water Absorption Test	Maximum 0.25%	Standard	IS:12866				
Bolt Shear Test	Minimum 375 N	Standard	IS:12866				
Load Difflection Test	Minimum 1100 N	Standard	IS:12866				

**COMPARISON OF** Parameter Machine Make FRP/GRP Sheet Polycarbonate sheet **MACHINE MAKES** Chemical stability Very high No stability **FRP/GRP SHEET AND** Reinforcement (Glass fibre) No reinforcement Reinforcement Mechanical Strength Very high due to reinforcement Low UV UV material UV coated

POLYCARBONATE
SHEET
COMPARISON OF
MACHINE MAKE
FRP/GRP SHEET AND
HAND LAY-UP
FRP/GRP SHEET

Parameter	Machine Make FRP/GRP Sheet	Hand lay up FRP/GRP sheet
Thickness	Uniform thickness	Thickness variation
Profile	Uniform profile	No uniform profile
Guard Film	Both side cling film	No film
Tensile strength	Min. 7000 PSI	7000 PSI
Flexural Strength	Min.14000 PSI	Min. 14000 PSI
Glass Content	Min. 30	25-30
Barcol Hardness	40 - 45	Upto 40
Availability	50,000 Sq.mtr / month	350 R.mtr.

**Disclaimer :** Seller Warrens that all goods & services (products) sold will conform to the specification, prepared, approved & issued by seller, unless otherwise stated & are subject to commercial tolerances expect as provided.



## CHEMICAL RESISTANT OPAQUE & TRANSLUCENT FRP/GRP ROOFING & CLADDING SHEETS



**OLD CORRODED ROOF (METAL)** 



FRP/GRP LOUVERS FRONT SIDE



FRP/GRP COOLING TOWER CLADDING

# CHEMICAL RESISTANCE FRP/GRP (FIBREGLASS REINFORCED PLASTIC / POLYMER) SHEETS MANUFACTURED BY CLM (CONTINUE LAMINATING MACHINE) AUTOMATIC PLANT

Ideal replacement of Metal, PPGI, Cement Sheet & Galvanize Roofing & Cladding Sheets for chemical resistance applications

## WHY CHEMICAL RESISTANCE FRP/GRP SHEET REQUIRED?

In Industries there are huge losses incurred due to following reasons:

- Corrosive Chemical Process
- Coastal Area
- Spillages of Chemicals on the Roof
- Due to Corrosive Vapor
- Due to Weathering like Snowfall / Extreme Rainfall.

## TYPE OF RESIN FOR CHEMICAL RESISTANCE FRP/GRP PANEL

- Using higher grade of Resin like Isophthalic Resin / Vinyl ester Resin.
- Top side Gel coated having Gelcoat on Vinyl ester Resin / Isophthalic Resin / RL UV with combination of Resin with Vinyl ester / Isophthalic Resin / RL UV.

## ADVANTAGES OF CHEMICAL RESISTANCE FRP/GRP SHEET

- Life of EVEREST FRP/GRP chemical grade sheet would be more than 20 years.
- Warranty of top side Gel Coated EVEREST FRP/GRP sheet is 15 years against any manufacturing defect. Thus Gel coated FRP/GRP sheet life is much higher than the normal FRP/GRP sheet.
- Excellent Resistance to Moisture, Ultraviolet Rays, Electrical Shock, temperature, water pressure & all chemical effects like Oils, Acids, different types of Fumes etc.
- Durable, Fire retardant, protection from Corrosion, Leakages, Rust, Rot & prevents Warping.
- Avoid breakage, shattering and chipping
- Zero Maintenance, Leak proof
- Quick & easy installation
- Easy relocatable
- It has good thermal/heat insulating property



## MACHINE MAKE GEL COATED FRP/GRP OPAQUE / TRANSLUCENT SHEET



TOP SIDE GEL COATING PROCESS IN MACHINE



EVEREST INTRODUCE FIRST TIME IN INDIA - CONTINUES LAMINATING MACHINE (CLM) PLANT WITH TOP SIDE GELCOAT.

"LIFE GUARD" GEL COATED FRP/GRP TRANSLUCENT / OPAQUE ROOFING / CLADDING PANEL.

#### WHAT IS GEL COAT?

Gel Coat is a Top Coat for regular FRP/GRP panel with high percent UV (Ultra Violet) resistance, High Abrasive Filler and better pigmentation for Opaque panels. Clear Gelcoat for Transucentsky light panel.

## WHY GEL COAT REQUIRED?

- ▶ It protect FRP/GRP panel from ABRASION, ERROSION of Surface
- Resin Evaporation (Fibre Matshown Phenomenon)
- ◆ Extra UV Protection
- Enhance life of Product like a Sun Screen Cream on Human Skin
- LONG WORKING LIFE making itself as Maintenance Free
- The illumination through the panel will remain uniform for long time

## OUR CAPABILITY OF MANUFACTURING TO LEAD THE MARKET.

We offer wide range of Combination of Gel Coat/Top Coat Sheet/Cladding from General Purpose, Roof Light, Isophthalic, Vinyl Ester, Superior Vinyl Ester, Bisphenol - Epoxy Vinyl Ester, etc from normal to high grade engineering Unsaturated Resin with higher percent of UV and Abrasion which LEAD us unmatched among competitors. Machine can produce minimum 2.5 Lac Sq.Mtr./annum.

#### APPLICATION OF TOP SIDE GEL COATED PANEL.

- ▶ Petro Chemical
- Cooling Tower Cladding
- Hazardous Chemical Industries
- Salt Plant
- Snow area
- Area for roofing

- Fertilizer Plant
- ◆ Costal Area
- → Effluent Treatment Plant
- ▶ Heavy Rainfall area
- ◆ High Temperature Working

GEL COATED SHEET ARE HAVING HIGHER WARRANTY THEN NORMAL SHEET, WARRANTY IS EXTENDED UP TO 20 YEARS AS PER APPLICATION, IN COMPARISON TO NORMAL SHEET OF 7 TO 10 YEARS.



## **ENVIRONMENTAL BENEFITS OF FIBRE REINFORCED PLASTICS (FRP/GRP)**

- LIGHT WEIGHT REDUCE STRUCTURAL COST
- ANTI-CORROSION REDUCE REPLACEMENT & MAINTENANCE COST
- \* BETTER INSULATION PROPERTY REDUCE ELECTRICAL CONSUMPTION FOR COOLING AND HEATING
- TRANSLUCENT PROPERTY REDUCE ELECTRICAL CONSUMPTION
- RECYCLE MATERIAL FRP CAN BE USED AS STRONG FILLER
- ELIMINATE 99% OF HARMFUL UV RAYS
- REDUCE THERMAL RADIATION AND SAVE ENERGY COSTS



## **COMPARATIVE CHEMICAL RESISTANCE CHART**

NAME OF THE CHEMICAL	CONC.(%)	1	2	3	4	5	6
Acetic Acid	25	65	66	99	99	90	99
Acetic Acid	50	27	32	82	82	75	82
Acetic Acid	Glacial	NR	NR	NR	NR	-	38
Acetone	10	NR	NR	-	-	-	82
Alum	All Conc.	65	66	99	121	104	121
Ammonium Chloride	All Conc.	77	66	99	99	100	99
Ammonium Hydroxide	5	NR	NR	82	82	82	82
Ammonium Phosphate (Mono / Dibasic)	All Conc.	60	77 / NR	99	99	-	99
Ammonium Sulphate	All Conc.	77	60	99	121	100	121
Benezene	Vapour	NR	32	RT	RT	NR	49
Benezene	100	NR	NR	NR	NR	NR	38
Brine	Saturated	77	66	99	99	104	99
Chromic Acid	10	43	NR	65	65	90	65
Crude Oils	100	77	43	99	121	-	121
Detergents Sulphonated	All	49	NR	99	82	_	82
Detergents Organic	All	38	NR	65	82	_	82
Diesel Fuels	All	77	60	82	99	_	99
Dimethyl Formamide	100	NR	NR	NR	NR	_	NR
Ethyl Acetate	100	NR	NR	NR	NR	NR	21
Ethyl Alcohol	50	43	32	38	38	RT.	65
Ethylene Glycol	All	-	0	99	99	105	99
Fatty Acids	All	77	66	99	121	104	121
Ferric Chloride	All	77	66	99	99	100	99
Fertilisers	-	43	27	65	65	37	65
Fuel Oils	100	65	54	82	99	-	99
Glycerine	100	77	66	99	99	100	99
Hydrochloric Acid	100	71	66	82	110	104	110
Hydrochloric Acid	25	43	-	82	110	80	110
Hydrochloric Acid	37	27	NR	65	82	70	82
Kerosene	-	65	66	82	82	27	82
Methyl Alcohol	100	27	NR	NR	NR	RT	38
Mineral Oils	100	77	66	99	121	-	121
Naphtha	100	49	66	82	99	RT	99
Nitric Acid	5	65	49	65	82	70	82
Nitric Acid	20	49	49	49	49	70	65
	40	49 NR	NR	NR	NR	- RT	RT
Nitric Acid							99
Oxalic Acid	Saturated 80	65	60	99	99	104	99
Phosphoric Acid	10	03 NR	NR	65	65	104	65
Pot. Hydroxide	45	NR NR	NR	82	82	71	82
Pot. Hydroxide	All	77	66	99		100	99
Sodium Chloride	25	NR	NR	82	99	100	65
Sodium Hydroxide	50	NR NR				93	82
Sodium Hydroxide			NR	99	99	-	
Sod. Hypochlorite	10	NR	NR 5.4	82	82	-	65
Soyabean Oil	All	77	54	99	99	104	99
Sulphuric Acid	Vapour	77	-	99	121	100	177
Sulphuric Acid	5	77	- 40	99	99	100	99
Sulphuric Acid	25	77	49	99	99	105	99
Sulphuric Acid	50	60	49	65	80	105	82
Sulphuric Acid	70	NR	NR	40	55	70	82
Sulphuric Acid	93	NR	NR	NR	NR	-	NR
Tannic Acid	All	65	66	99	99	104	99
Toluene	100	NR	NR	27	38	NR	49
Vinegar	All	77	66	99	99	-	99
Water (Sea)		77	66	82	99	104	99
Water (Deionised)	All	77	32	82	82	-	82
		77		0.0	0.0	0.5	0.0
Water (Distilled) Xylene	All All	77 NR	60 NR	82 27	82 38	95 NR	82 49

NR: Not Recommended

RT : Room Temperature

2 Isophthalic Resin

3 Vinyl Ester Resin4 Bisphenol Vinyl Ester Resin

6 Superior Vinyl Ester Resin

5 Bisphenol Fumarate Vinyl Ester Resin

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approved & issued by seller, unless otherwise stated & are subject to commercial tolerances expect as provided.

Note : Fighures shown are the maximum recommended service temperature in Degree  $^{\circ}$ C.



## INDUSTRIAL ROOFING RAIN WATER GUTTER SYSTEM



FRP/GRP RAIN WATER GUTTER



FRP/GRP RAIN WATER GUTTER



FRP/GRP DOWNTAKE NOZZLE

# CHEMICAL RESISTANCE FRP/GRP (FIBREGLASS REINFORCED PLASTIC / POLYMER) SHEETS MANUFACTURED BY CLM (CONTINUE LAMINATING MACHINE) AUTOMATIC PLANT

**Everlast** is an excellent substitute for conventional M.S. / G.I. / A.C. / RCC / PCGI Gutter system for Industrial Buildings. Everlast gives perfect weather resistance and Flexibility along with the obstacle free and algae formation free smooth surface top on layer. It is a highly economical gutter system to drain out the rainwater satisfying the norms of civil engineering.

Also available matching accessories in the form of down take nozzle, stop ends, cross-joints, etc. The skilled team of Everest provides the necessary guidelines for the erection at the site and necessary lap joints to make it absolutely leak proof, maintenance free and provides long lasting performance.

#### **COMPOSITE LAYERS**

- It is consisting of a Modified Propylene glycol (MPG) based high built coat that gives it weather resistant, flexible & with smooth surface on top layer
- Resin rich vein layer that provides extra back up and avoids surface erosion
- Chopped strand matt reinforcement for mechanical strength
- Cross-linked Reinforcement to induce the stiffness & sturdiness

## **FEATURES**

- The unsaturated polyester matrix gives bonding to the reinforcement structure
- It can be manufactured as per the required girth / circumference and is available in different colour shades matching the colour of roofing sheets and exteriors of the shades
- Weatherproof, leakproof and corrosion-free
- It is lightweight and hence saves the structural cost and erection cost of and industrial buildings
- Flexibility: Available in the shapes of Valley, Eaves, Boundary walls and Semi circle pipe. with Monolithic Joints





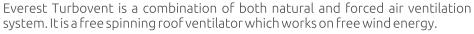
## **TOP VIEW OF ROOF VENTILATOR**

#### FRP/GRP BASE PLATE



Everflow is a ventilating system for natural fresh airflow in the industrial buildings. It is competent & completely leak-proof, maintenance-free, and durable system without using any kind of electrical or mechanical energy. Everflow works on the basic principle that hot air moves upwards. It provides an excellent air circulation through systemized outlet for hot air & inlet of fresh air.

#### WHAT IS EVEREST TURBOVENT AIR VENTILATOR?



It functions as a natural ventilator when there is a difference in thermal or wind pressure between the inside and outside of the building which forces the air to move through the opening of the ventilator.

It also acts as a forced ventilation system when the Turbovent rotates to create a negative pressure within the building. Cooler air from outside will rush into the negative space within the building in order to maintain an equilibrium condition.



## **FEATURES**

- The air circulation is through natural drought.
- Minimum maintenance.
- No obstruction for outgoing air.
- fasterair cycle and better ventilation.



### SPECIAL FEATURES OF EVEREST TURBOVENT

- No operating cost as it works on free wind energy
- Dual benefit of natural ventilation and natural daylight at no cost
- It is a free spinning ventilator that provides fresh air in your roof space and living area whole year round 24 hours a day at Zero operating cost
- Light weight, strong and durable construction for resistance against extreme climatic conditions
- Maintenance free "Fit & Forget"
- Rigid Spider type frame construction to withstand Cyclone, Storm & Twisters
- Whisper quiet in operation
- ▶ Easy & Quick installation on any roof profile
- Aerofoil Blades to prevent water and dustingress
- Dynamically Balanced for frictionless rotation also at lowest wind velocity



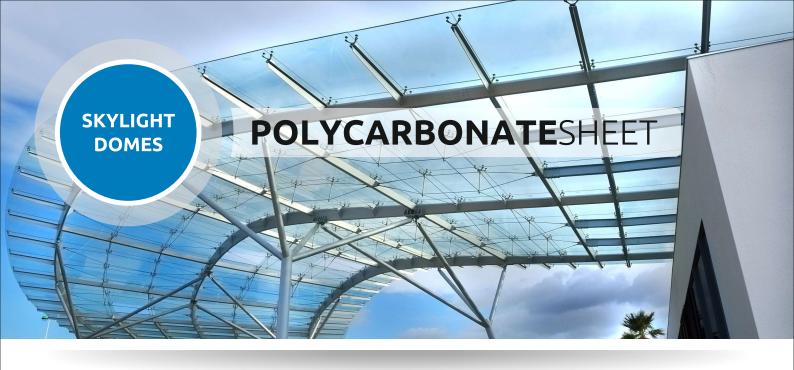
## SALIENT FEATURES OF POLYCARBONATE VENTILATOR BASE PLATE.

- Available in almost all types of roofing profiles. | High impact strength. | Weather resistant.
- UV stabilized & Temperature resistant (-40C to +130C). Compared to FRP/GRP, PC base plate have minimal thermal expansion and contraction, which prevents cracks in long run.
- Light Transmission PC Base plate stable Transmits light up to 89% for long time.
- FRP/GRP retain Dust and Become dirty after some time.
- Available in 21" and 24" Diameter, can be customized as per Requirement.
- Our expertise in roofing products enables us to design base plate matching with Metal sheetprecision, thus eliminating the possibility of leakage.
- Polycarbonate ventilator base plate help in cutting down electricity charges.
- In today's context, it is a great saving and also contributing towards saving the environment.
- We can manufacture bases in any size (upto length 2000mm & width 1220mm)

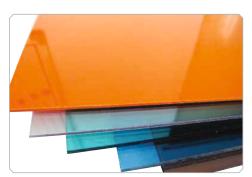
## **TYPICAL DATA SHEET**

GENERAL PROPERTIES	METHOD	UNITS	VALUE
Density	ISO 1183	g/cm3	1.2
Light Transmission (Dependinh on thickness)	ASTM D 1003	%	81 - 90
Refractive index	ISO 489		1,585
UV protection layer			40
Machanical			
Tensile Strength at yield	ISO 527-2	Мра	60
Tensile Modulus	ISO 527-2	Mpa	2300
Elongation at break	ISO 527-2	%	>100
Elongation at yield		%	6
Flexural Modulus	ISO 178	Mpa	2330
Charpy Un-notched	ISO 179	kJ/m2	Not Break
Izod Impact notched	ISO 180a	kJ/m2	>65
Thermal			
Temp of deflection (HDT) Under load of 1.8MPa	ISO 75-1	Degree C	130
Vicat softening temp (50 Degree C/h 50N)	ISO 306	Degree C	133
Thermal conductivity	DIN 52612	W/m x Degree C	0.3
Coefficient of linear thermal expansion 0-50 Degree C	ISO 11359	mm/(m x 1/ Degree C)	0.07
GWFI (Glow-Wire Flammability Index)	IEC60695-2	Degree C	900
Electrical			
Volume Resistivity	IES 60093		3 x 10 14
Surface Resistivity, dry	IEC 60093		6 x 10 15
Dissipation Factor 1Mhz	IEC 60250		0.009
Dissipation Factor 100Hz	IEC 60250		0.0006

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## **POLYCARBONATE SOLID SHEET / MULTI WALL**



FLAT SOLID SHEET / MULTIPLE WALL



POLYCARBONATE SHEET DOM



**CORRUGATED SHEET** 

We are leading distributor of Polycarbonate Sheet, Polycarbonate Corrugated Sheets, Polycarbonate Ventilator Base Plates, Polycarbonate Thermoforming Articles, etc. in India. The Brand not only indulge in making quality products but also creating innovative benchmarks. We manufacture Base plate to match all roofing profiles available and further, we can customize to any customer's specification. Our expertise in mould design, mould re-design, mould fabrication give us un-matching speed to serve our customers requirements.

#### **POLYCARBONATE SOLID SHEET**

## COLORS\*

Transparent: Clear, Solar Grey, Bronze, Red, Blue, Green, Smart Blue, Smart

Green, Bluish Breeze.

Translucent: Yellow, White Opal, White Diffuser, Mint Green, Solar Control,

Solar Olympic, Solar Ice, Red.

Opaque : Dark Green, Red Brick, Black, Dark Blue, Cream, Light Grey, Dark

Grey, Off White, Brown

**Surface**: Smooth, Embossed, Prismatic, Crystal

#### **DIMENSIONS\***

Width: 1220-2150mm | Length: 30500-61000mm | Thickness\*: 1-12mm

\* Additional options are available upon request.

#### **POLYCARBONATE CORRUGATED SHEET**

#### **COLORS\***

**Transparent**: Clear, Solar Grey, Bronze, Sky Blue, Transparent Green, Smart Grey.

Translucent : White Opal, Diffuser, Solar Control, Solar Ice, Mist Green,

Smooth Cream

Opaque: White, Green, Blue, Red Brick

**Surface**: Smooth, Embossed, Prismatic, Crystal

#### **DIMENSIONS\***

Width: 660 - 1870mm (By Profile) | Length: 1500-6500mm (By Profile)

\* Additional options are available upon request.

## SEGMENTS



REAL ESTATE



4

RESIDENCE & INFRASTRUCTURE COMMERCIAL COMPLEX



**TEMPLES** 



AIR PORTS



COLLAGE



RAILWAY STATIONS



**HOSPITAL** 



**SCHOOL** 



**PHARMACEUTICAL** 



RELIGIONS



PAPER



MARINE



PORTS



GOVERNMENT ORGANIZATIONS



COMMERCIAL COMPLEX



**RESORTS** 



**INDUSTRIES** 



**HOTELS** 



**BUS STATION** 



**AUNIT OF** 



## **EVEREST COMPOSITES PVT. LTD**

## **REGD. OFFICE / FACTORY**

#### Unit 1: (FRP/GRP DIVISION)

Everest Compound, Haridham Sokhda Road, Beside Telephone Exchange, At & Post: Sokhda, Vil.: Sokhda, Dist.: Vadodara - 391 745, Gujarat-India. +91 265 2886 004 | +91 987 954 2289 | enquiry@everestfibre.com

### Unit 2: (GRC & PREFAB / PUF PANEL DIVISION)

Opp. Lamdapura Bus Stop, At & Post : Lamdapura, Ta. : Savli, Dist. : Vadodara - 391 775, Gujarat-India. +91 2667 262 011 | +91 997 899 2929 | enquiry@everestfibre.com