Aéron©

THE COMPOSITE EXPERT...

www.aeroncomposite.com

FIBERGLASS STRUCTURAL PROFILES

FIBERGLASS STRUCTURAL PROFILES

GRP or FRP Structural pultruded profiles are manufactured by combining a resin matrix with a fibre reinforcement. This is formed and cured in a continuous process creating a product of extraordinary strength and resilience. GRP Structural Pultruded Profiles provide a variety of benefits and mechanical properties matching or exceeding steel equivalents. A wide range of structural profiles are available including U Channel, I - Beam, Tube, Box, Angle, Rod & Hand Rail.

Resin System

As a standard, Isophthalic polyester resins are used for the matrix. To fulfill special requirements the following resin types are applied:

- Isophthalic resin : moderate corrosion resistanceand fire resistance
- Vinyl ester resin : extreme corrosion resistanceand fire resistance

For design parameters ask for design manual from sales team.

Type Of Structural Profiles

Angle

C Channel

Rect Box Section

SQ. Box Section

Round Tube

I Beam

Rod

Fluted Tube

DECK - 1

DECK - 2

Strut Channel

Rail Channel

Top Rail

HAT - 80

Toe Guard

Custom Profile

Flat

The profiles listed above are only a very small proportion of our range. If you should require a custom profile please do not hesitate to contact us. All profiles manufactured in accordance with CTI 137 Standard.

FIBERGLASS ADVANTAGE

INDUSTRY SEGMENT

Various properties of Fiberglass Pultruded Structural Profile

Mechanical Properties	Standard Followed	Units	Lengthwise Min. Value	Crosswise Min. Value
Tensile Stress	ASTM D-638	MPa	206.8	48.2
Tensile modulus	ASTM D-638	GPa	17.2	5.5
Compressive Stress	ASTM D-695	MPa	206.8	103.4
Compressive modulus	ASTM D-695	GPa	17.2	6.9
Flexural Stress	ASTM D-790	MPa	206.8	68.9
Flexural Modulus	ASTM D-790	GPa	11	5.5
Izod Impact	ASTM D-256	J/mm	1.28	0.22
Ultimate Bearing Stress	ASTM D-953	MPa	206.8	206.8
Modulus of Elasticity	Full Section	GPa	17.9	-
Shear Modulus	Full Section	GPa	2.9	-
Poison's Ratio	ASTM D-3039	mm/mm	0.33	-
Short Beam Shear	ASTM D-2344	MPa	31	-

Physical Properties	Standard Followed	Units	Min. Value
Barcol Hardness	ASTM D-2583		45
24 Hours Water Absorption	ASTM D-570	%	Max 0.6
Density	ASTM D-792	gm/cc	1.72-1.95
Glass Content	ASTM D-2584	%	min 55%
Limiting Oxygen Index	ASTM D-2863	%	min 30%

Electrical Properties	Standard Followed	Units	Min. Value
Arc Resistance Lengthwise	ASTM D-495	Seconds	120
Dielectric Strength Lengthwise	ASTM D-149	kV/mm	4.5

Flammability Properties	Standard Followed	Units	Min. Value
Flame Spread	ASTM E-84	Flame spread	Less than 25 mm
Flammability	ASTM D-635	Seconds	Less than 5 sec.
Vertical Burn Test	UL 94	----	V0

Profiles are checked for Visual Defects as per ASTM D 4385-02 and Dimensional Tolerance as per ASTM D3917 - 12

Fabrication Details

Beam to Beam

Beam to Beam

Wide Flanged Column

Beam to Channel

Beam Over Beam

Channel to Channel

Fiberglass
Cable Tray

Fiberglass
Structural Profiles

Fiberglass
Ladder

Trefoil Clamp

Fiberglass
Handrails

Fiberglass
Pultruded Gratings

Fiberglass
Canopy

Fiberglass
Fencing

Fiberglass
Molded Gratings

Fiberglass
Poles & Mast

Aeron®

THE COMPOSITE EXPERT...

AERON COMPOSITE PVT. LTD.

Reg. Off.: Block No. 496/P, Tajpur Road, Sarkhej Bawala Highway,
Changodar - 382213 Tal. Sanand, Ahmedabad, Gujarat - INDIA.
T : +91 79 6525 8500 | F : +91 79 26561238 | M : +91 99099 88266
E : info@aeroncomposite.com | W : www.aeroncomposite.com

Scan to Save

CTI MEMBER

TÜV SÜD

FRP INSTITUTE

ieema your link to electricity

AHMEDABAD MANAGEMENT ASSOCIATION