



THE COMPOSITE EXPERT...

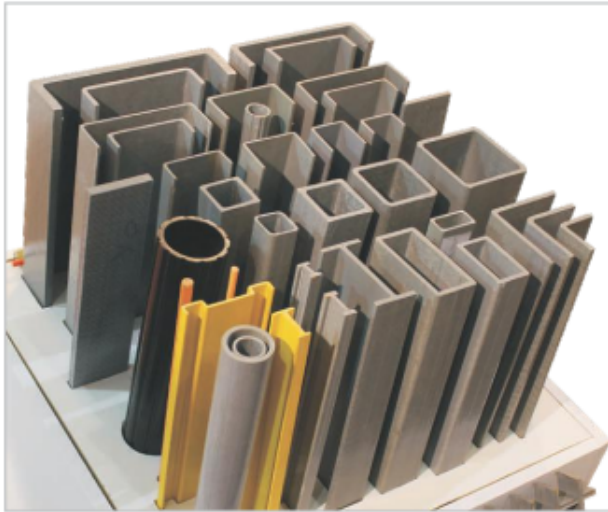
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FIBERGLASS STRUCTURAL PROFILES



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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.

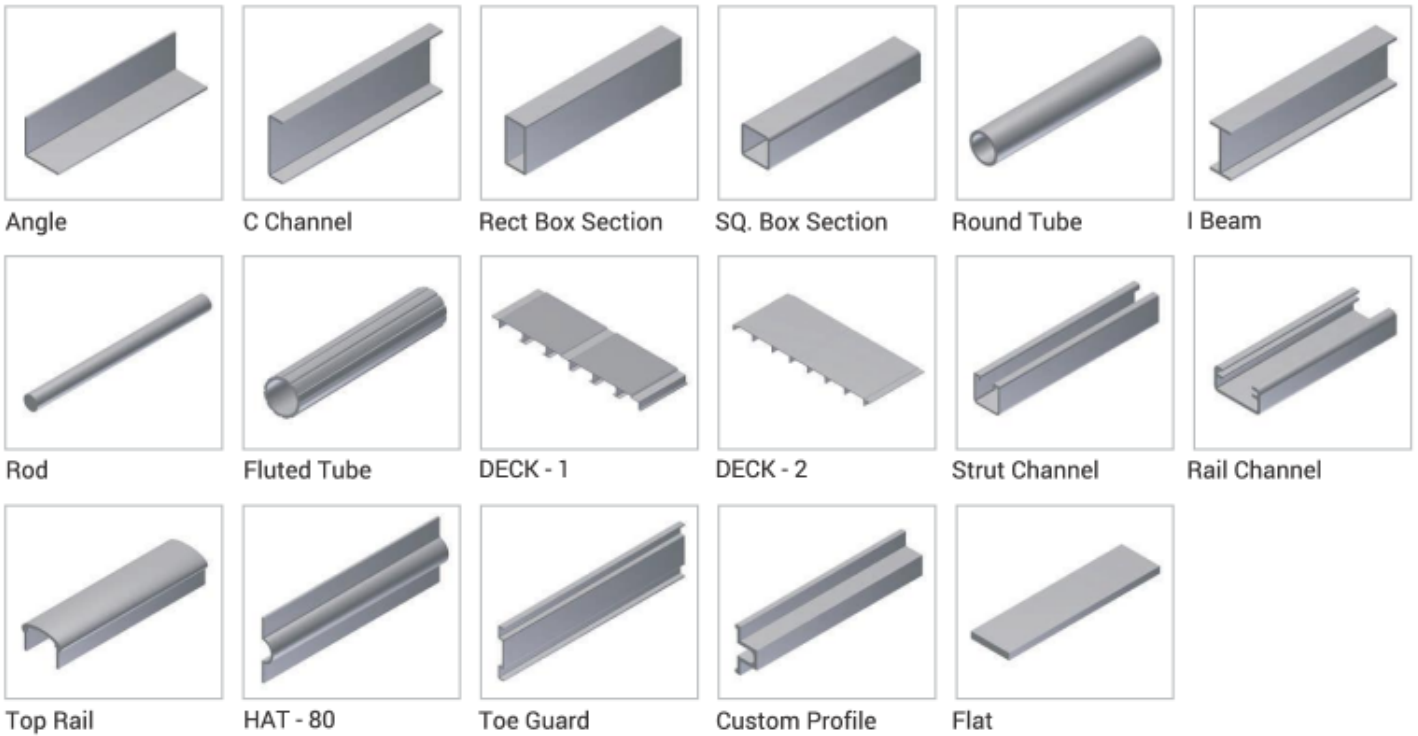
Resin System

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 resistance and fire resistance
- » Vinyl ester resin : extreme corrosion resistance and fire resistance

For design parameters ask for design manual from sales team.

Type Of Structural Profiles



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**



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