

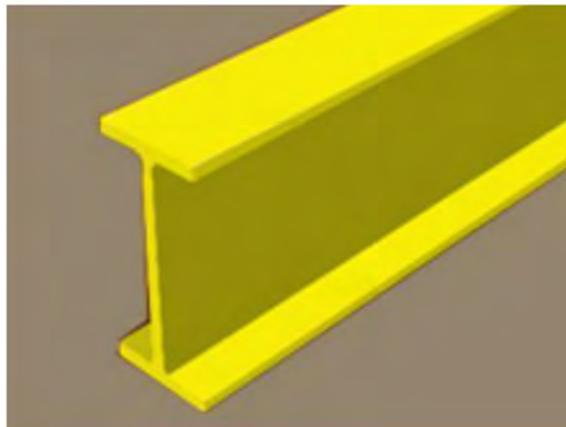
# Fiberglass Structural Products



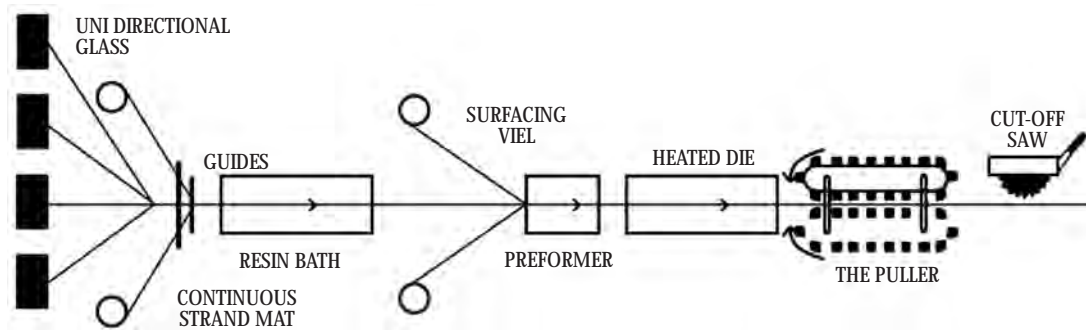
**MonaComposites**

[www.monacomposites.com](http://www.monacomposites.com)

Contents .....	02
Applications .....	03
Structurals: Available Shapes .....	04-07
Miscellaneous Products & Assemblies .....	08
Chemical Resistance Chart .....	09



## STRUCTURALS PULTRUSION PROCESS



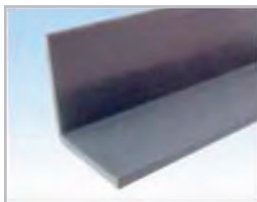
The pultrusion process described in earlier pages is suited to manufacturing structural shapes. It allows structural member to be manufactured to length; the only restriction is transportation limitations.

Continuous glass fibers that enter the process on the left are actually pulled by a tractor (illustrated) or hand-over-hand pullers shown above on the right. The glass bundle of continuous strands is then wrapped with continuous strand mats that provide the transverse strength. The entire reinforcement bundle is pulled into a liquid resin bath (polyester or vinyl ester) and wetted out. After that, the wetted reinforcement package is wrapped in a surfacing veil. That leaves a resin-rich finish on the part and creates both a barrier to corrosion and a smooth finish. The completed package goes into a preformer that roughly shapes the package before it enters the heated die for curing. The die is the exact shape of the final part desired. When the package leaves the die it is over 90% cured and solid. The length of the part required is pulled through the cutoff saw and the process is complete.

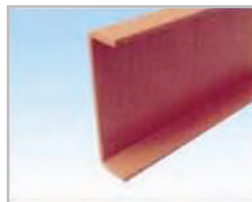
## STRUCTURAL SHAPES

Mona Composites manufactures all standard shapes used for structural projects. They are manufactured in both vinyl ester (standard color is beige) and polyester (standard color is dark gray). Embedment angles are only manufactured in vinyl ester and standard color is dark gray to compliment the color of concrete. Reference *Available Shapes* List on the following page for a complete list of available structural.

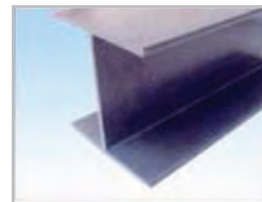
Angle



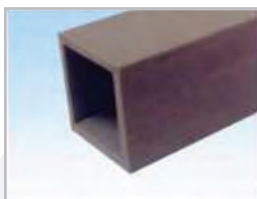
Channel



Wide Flange Beam



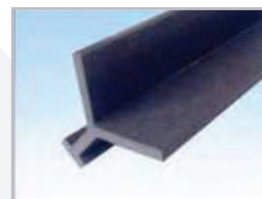
Square Tube

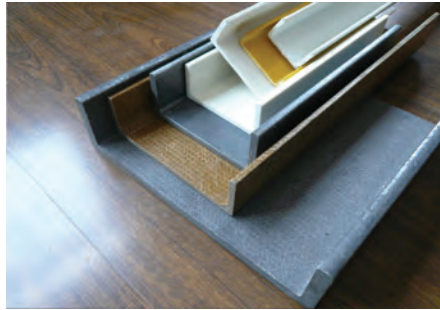


Round Tube



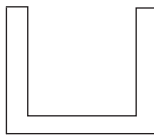
Embedment Angel



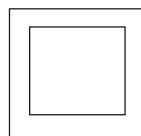
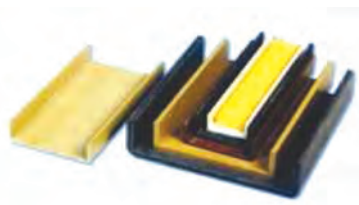


## CHANNEL

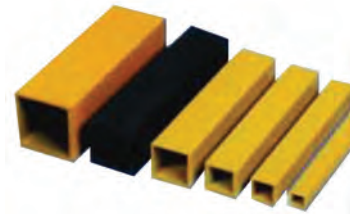
View / Example



Channel



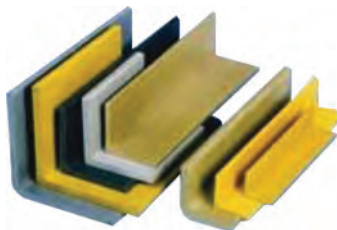
Square tube



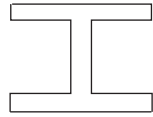
View / Example



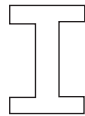
Equal Leg Angle



View / Example



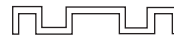
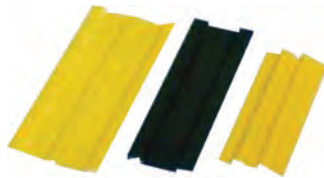
Wide Flange Beam



I-Beam



Fluted Round Tube



Kick Plate



Round Tube

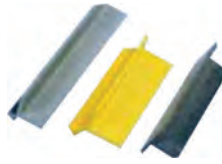


# Structurals : Available Shapes

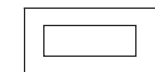
View / Example



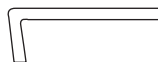
Embedment Angle



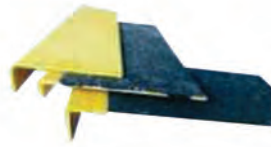
Flat Sheet



Rectangular Tube



Tread Cover



Solid Square Bar    Solid Round Bar



Note: All structural shapes are available in 20' - 0" stock length. Please contact Mona Composites for available sizes & resin. Custom shapes in various lengths, colors, & resin are available upon request.

■ Pultrusion profiles wood grain series



## Pultrusion profiles Wood Grain Series

Mona Composites also manufactures FRP shapes that mimic wood grains on its surface. These components are used in furniture manufacturing, decoration, large garden flowerpot, etc.

## ◆ Grating Hold Down Clips



## ◆ Ladder, Handrail, Shutter, Fence



◆ Cage Ladder

◆ Shutter

◆ Sidewalk Isolation Fence



◆ Highway Fence

◆ Square Tube Handrail

◆ Fence



◆ Stairs

◆ Trolley



# Chemical Resistance Chart

CHEMICAL ENVIRONMENT	% CONCENTRATION	TEMPERATURE	POLYESTER	ISOPHTHALIC	VINYLESTER
Acetic Acid	50	MAX	NR	NR	R
Acetone	100	75	NR	NR	NR
Alcohols	100	120	NR	NR	NR
Alum	ALL	MAX	R	NR	120
Aluminum Chloride	ALL	MAX	NR	NR	120
Aluminum Fluoride	20	75	SS	SS	R
Ammonium Hydroxide	30	75	NR	NR	R
Ammonium Salts-Neutral	ALL	120	R	R	R
Ammonium Salts-Aggressive	ALL	75	SSI	SSI	SSF
Aromatic Solvents	ALL	75	NR	NR	TEST
Barium Salts	ALL	MAX	R	R	R
Benzene	100	140	NR	SSI	SSI
Black Liquor (Pulp Mill)	ALL	MAX	NR	SSI	R
Bleach Liquor (Pulp Mill)	ALL	MAX	NR	SSI	R
Calcium Hydroxide	25	MAX	SSI	SSF	R
Calcium Hypochlorite	ALL	MAX	NR	SSI	R
Calcium Salts	ALL	MAX	R	R	R
Carbon Tetrachloride	100	75	NR	SSI	R
Chlorinated Hydrocarbons	100	75	TEST	TEST	TEST
Chlorine Dioxide	SAT	140	NR	NR	R
Chlorine Water	SAT	120	TEST	SSI	R
Chlorine, Wet	SAT	MAX	NR	NR	R
Chlorobenzene	100	75	NR	NR	SSF
Chlorobenzene	ALL	Up to 100	NR	NR	R
Chloroform	100	75	NR	NR	NR
Chromic Acid	50	140	NR	SSF	SSF
Citric Acid	ALL	MAX	R	R	R
Copper Cyanide Plating	ALL	125	SSI	SSF	R
Copper Salts	ALL	MAX	R	R	R
Crude Oil (Sweet or Sour)	ALL	MAX	R	R	R
Dichlorobenzene	100	75	NR	NR	NR
Ethers		75	NR	NR	NR
Ferric Chloride	100	MAX	R	R	R
Ferric Salts	ALL	MAX	R	R	R
Fluoride Salts+HCl	ALL	75	NR	SSF	R
Fluosilicic Acid	10	75	SSF	SSF	R
Formaldehyde	37	150	SSI	SSI	R
Formic Acid	25	100	SSI	SSF	R
Fuel (Diesel, Jet, Gasoline)	ALL	100	R	R	R
Glycerine	100	MAX	R	R	R
Green Liquor (Pulp Mill)	ALL	MAX	NR	NR	R
Hydrobromic Acid	48	MAX	NR	SSF	SSF
Hydrochloric Acid	10	MAX	NR	NR	R
Hydrochloric Acid	30	MAX	NR	NR	R
Hydrochloric Acid (concentrated)	ALL	Up to 180	NR	NR	SSI
Hydrocyanic Acid	ALL	MAX	NR	NR	R
Hydrofluoric Acid	20	75	NR	NR	SSF
Hydrogen Peroxide	30	75	NR	R	R
Lactic Acid	100	MAX	NR	R	R
Lime Slurry	SAT	MAX	R	R	R
Lithium Chloride	AT	MAX	NR	NR	NR
Lithium Salts	ALL	MAX	R	R	R
Magnesium Salts	ALL	MAX	R	R	R
Maleic Acid	100	MAX	NR	SSF	R
Mercury Chloride	100	MAX	R	R	R
Nickel Salts	ALL	MAX	R	R	R
Nitric Acid	20	120	SSI	SSF	R
Nitric Acid	35	100	NR	NR	R
Nitric Acid	40	Ambient	NR	NR	SSI
Nitric, Hydrofluoric	20:2	75	NR	NR	SSI
Nitrous Acid	10	75	R	R	R
Ozone for Sewage Treatment		100	R	R	R
Phenol	10	75	NR	NR	R
Phenol	88	Ambient	NR	NR	SSF
Phosphoric Acid	85	MAX	SSF	R	R
Phosphoric Acid, Super	115	MAX	TEST	SSI	R
Potassium Hydroxide	10	120	NR	SSI	R
Potassium Salts	ALL	MAX	R	R	R
Silver Nitrate	100	MAX	R	R	R
Sodium Cyanide	ALL	75	R	R	R
Sodium Hydroxide	50	MAX	NR	NR	120
Sodium Hydroxide	10	MAX	NR	NR	120
Sodium Hypochlorite (Stable)	10	100	SSI	SSF	R
Sodium Salts-Neutral	ALL	MAX	R	R	R
Sodium Salts-Aggressive	ALL	75	TEST	SSI	SSF
Sulfur Dioxide	SAT	MAX	NR	NR	R
Sulfuric Acid	25	MAX	NR	R	R
Sulfuric Acid	50	MAX	NR	NR	NR
Sulfuric Acid	75	100	NR	SSI	R
Toluene	100	120	NR	SSI	SSF
Trichloroethane 1,1,1	ALL	75	NR	SSI	SSF
Trisodium Phosphate	50	MAX	SSI	SSI	R
Water (Fresh, Salt, Moderate D.I.)	100	MAX	R	R	R
Wet Chlorine/Hydrochloric Acid	10-20	Up to 350	NR	NR	SSF
White Liquor (Pulp Mill)	ALL	MAX	NR	NR	R
Zinc Chloride Plating	ALL	75	NR	SSF	R
Zinc Salts	100	MAX	R	R	R

NR = NOT RESISTANT

R = RESISTANT

SSI = SPLASHES & SPILLS INFREQUENT

SSF = SPLASHES & SPILLS FREQUENT

TEST = TEST ON PRODUCT



3936A Dunvale Road,

Houston, TX 77063

Tel : 832-831-9828

Fax : 832-831-9829

Cell : 281-813-9487

Email : [sales@monacomposites.com](mailto:sales@monacomposites.com)

Web : [www.monacomposites.com](http://www.monacomposites.com)