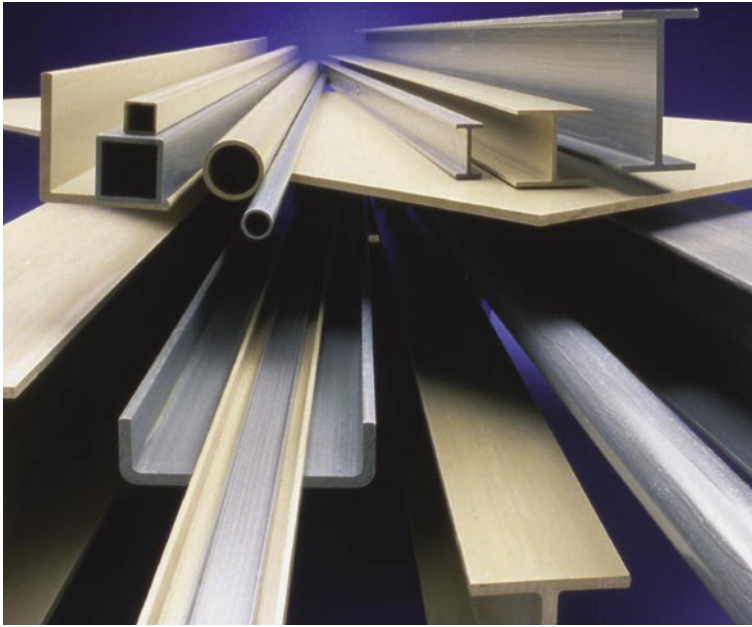


# COMPARE

## EXTREN® vs. STRUCTURAL TIMBER



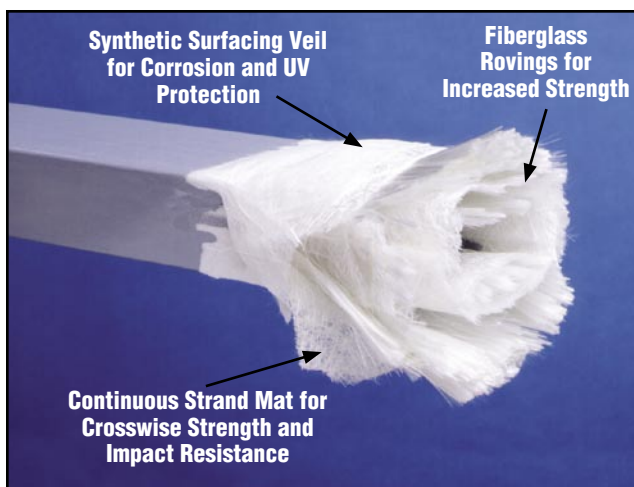
EXTREN® fiberglass structural shapes and plate have a number of significant advantages over timber in many structural applications. EXTREN® will not rot or decay and is not susceptible to insect attack.

Unlike wood, EXTREN® requires no environmentally unfriendly preservatives or repellants, does not absorb any significant amount of water and is consistent in strength and appearance piece-to-piece (no culling). EXTREN® also is stronger, more rigid and lighter weight than structural timber.

For more EXTREN® design information, visit [www.strongwell.com/designmanual](http://www.strongwell.com/designmanual) for the online Strongwell Design Manual!



*This plywood fan deck has rotted away making it dangerous for workers to walk on.*



### EXTREN® fiberglass structural shapes are:

- Corrosion Resistant
- Strong
- Low Maintenance
- Low in Conductivity
- EMI/RFI Transparent
- Lightweight

***Is EXTREN® the best material choice to meet the requirements of your application?  
Turn over to compare the features of EXTREN® fiberglass structural shapes and timber structural shapes!***

**COMPARE!**

**EXTREN®  
FIBERGLASS STRUCTURAL SHAPES**

**VS. STRUCTURAL TIMBER  
DOUGLAS FIR**

<b>CORROSION RESISTANCE</b>	Superior resistance to a broad range of chemicals. Unaffected by moisture or immersion in water if ends are properly sealed. Surfacing veil and UV additives create excellent weatherability.	Can warp, rot and decay from exposure to moisture, water and chemicals. Coatings or preservatives required to increase corrosion or rot resistance can create hazardous waste and/or high maintenance.
<b>INSECT RESISTANCE</b>	Unaffected by insects.	Susceptible to insect attack (marine borers, termites, etc.). Coatings to increase resistance to insects can be environmentally hazardous.
<b>STRENGTH</b>	EXTREN® is stronger and has higher flexural strength than timber. Ultimate flexural strength (Fu) LW = 30,000 PSI, CW = 10,000 PSI. Compression strength is 30,000 PSI.	(Extreme fiber bending = up to 2800 PSI.*) Compression parallel to grain = up to 1800 PSI.*
<b>STIFFNESS</b>	EXTREN® is approximately 1-1/2 times as rigid as wood. Modulus of elasticity LW = 2.5 x 10 <sup>6</sup> PSI, CW = .8 x 10 <sup>6</sup> PSI.	Modulus of elasticity = up to 1.8 x 10 <sup>6</sup> PSI.*
<b>ELECTRICAL CONDUCTIVITY</b>	Low conductivity properties — high dielectric capability.	Timber can be conductive when it is wet.
<b>WEIGHT</b>	Specific gravity = 1.7 EXTREN® has significantly higher strength-to-weight ratio.	Specific gravity = .51 (oven dried).*
<b>FINISHING AND COLOR</b>	Pigments added to the resin provide color throughout the part. Special colors available. Composite design can be customized for required finishes.	Must be primed and painted for colors. To maintain color, repainting may be required.
<b>COST</b>	Lower maintenance, longer product life often equals lower overall costs.	Lower initial cost.
<b>ENVIRONMENTAL</b>	EXTREN® shapes and plate are inert and do not release toxic chemicals, therefore making them easily disposable in landfills.	Treated wood has been banned for several applications. Extreme care in use and disposal is required.  <i>*Surface dry at 19% max moisture content <u>Design Values for Wood Construction, National Design Specification for Wood Construction.</u></i>

**THE CHOICE! EXTREN® Fiberglass Structural Shapes and Plate!**



**STRONGWELL**  
ISO-9001:2000 Certified Manufacturing Plants

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