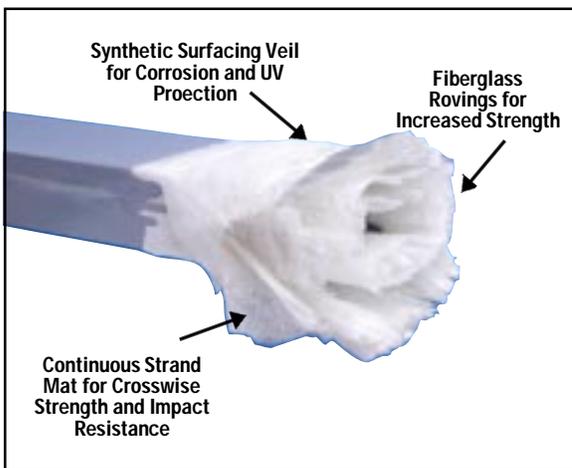
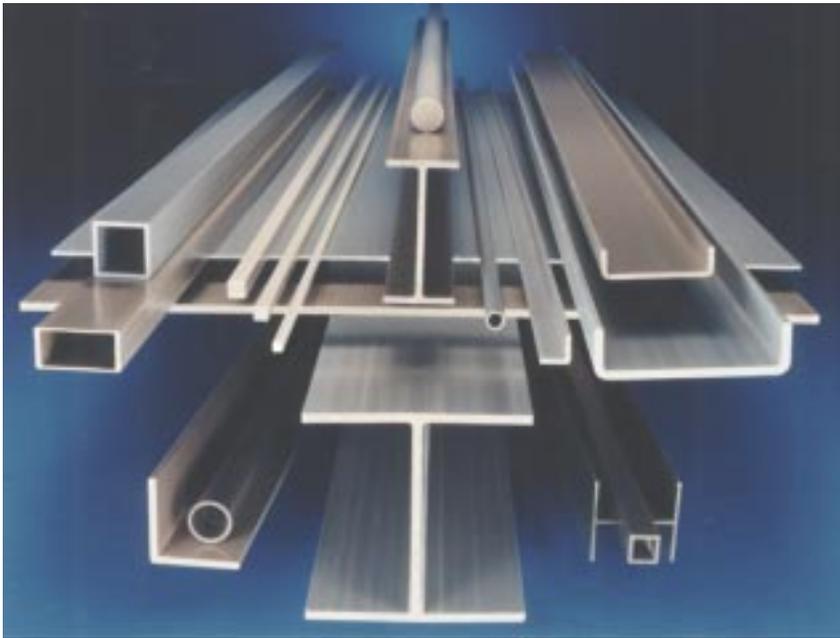


COMPARE

EXTREN®

vs.

STRUCTURAL TIMBER



EXTREN® is a proprietary combination of fiberglass reinforcements and thermosetting polyester or vinyl ester resin systems. It is produced in more than 100 standard shapes. A 380 page Design Manual is available from Strongwell.



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® is stronger, more rigid and lighter weight than structural timber.

Is EXTREN® a better choice for your application? Consider the point-for-point comparison on the back of this page.

COMPARE!

**EXTREN®
FIBERGLASS STRUCTURAL SHAPES**

**VS. STRUCTURAL TIMBER
DOUGLAS FIR**

CORROSION RESISTANCE	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.
INSECT RESISTANCE	Unaffected by insects.	Susceptible to insect attack (marine borers, termites, etc.). Coatings to increase resistance to insects can be environmentally hazardous.
STRENGTH	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.*
STIFFNESS	EXTREN® is approximately 1-1/2 times as rigid as wood. Modulus of elasticity LW = 2.5×10^6 PSI, CW = $.8 \times 10^6$ PSI.	Modulus of elasticity = up to 1.8×10^6 PSI.*
ELECTRICAL CONDUCTIVITY	Non-conductive — high dielectric capability.	Timber can be conductive when it is wet.
WEIGHT	Specific gravity = 1.7 EXTREN® has significantly higher strength-to-weight ratio.	Specific gravity = .51 (oven dried).*
FINISHING AND COLOR	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.
COST	Lower maintenance, longer product life often equals lower overall costs.	Lower initial cost.

**Surface dry at 19% max moisture content
Design Values for Wood Construction, National
Design Specification for Wood Construction.*

THE CHOICE! EXTREN® Fiberglass Structural Shapes and Plate!



STRONGWELL

ISO-9001 Certified Manufacturing Plants

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**EXTREN® manufacturing location*

CHATFIELD DIVISION

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