### ADVANCED THERMOPLASTIC COMPOSITE

- LIGHTWEIGHT
- HIGH STRENGTH
- LOW COST
- MOISTURE AND SOLVENT RESISTANT
- CORROSION RESISTANT
- HEAT-FORMABLE
- COMPLETELY RECYCLABLE
- EXPANSION/CONTRACTION COMPARABLE TO ALUMINUM
- EASY TO INSTALL AND REPAIR
- EASY TO CLEAN















### Manufactured to be Tough

It's easy to understand the strength of Versitex when you see how it is made. It begins by combining continuous glass fibers, impregnated with tough, corrosion-and moisture-resistant polypropylene into a 0/90° degree-bi-directional structure. When a series of these substrate layers are combined under heat and pressure, then cooled, they form an incredibly strong laminate that can be used in an almost unlimited number of applications.

How strong? The results of laboratory testing showed the burst strength of Versitex VR2, which has a nominal thickness of 0.060 inch, was more than twice that of 0.090-inch fiberglass-reinforced polyester. Other key properties are equally impressive. Versitex resists rotting, corrosion and mildew, and is not affected by cleaning chemicals. Versitex sheet can be made with a special fabric backing to help promote adhesion of injected or poured foam systems to create a lightweight, high performance panel for refrigeration or sound- and vibration-damping applications.

Continuous glass strands, oriented in two directions, provide multi-dimensional strength.









Every layer of Versitex composite sheet begins when glass fiber and polypropylene are combined to form a sheet with unidirectional reinforcement.

Depending on application requirements, up to 10 layers of bi-directional Versitex sheet are laminated using heat and pressure to form a sheet of specified thickness.

Two sheets are combined in a proprietary process that forms a single lightweight 0/90° bi-directional substrate.

The combination of bi-directional glass reinforcement and polypropylene results in a sheet with tremendous toughness and a smooth, moisture- and solvent-resistant surface. Versitex is shipped in continuous rolls or as cut sheet on pallets.



If you are using almost any form of sheet material — plywood, fiberglass, steel or aluminum — you should know there are alternatives. New composite sheet materials that can perform better, last longer, reduce weight and save money. Sheet that can be easily cut, formed, drilled and fastened, and economically recycled.

# Much Tougher Than What You're Used To;



Versitex \*\* advanced reinforced thermoplastic sheet from U.S. Liner is replacing traditional materials in a variety of markets such as truck/trailer, recreational vehicles, rail transport, shipping and storage containers, automotive, building products and the military. But that's only the beginning. Versitex sheet brings so many advantages to so many different applications, your imagination may be the only real limitation.

First and foremost, Versitex is tough. To understand just how tough, take a 1 sq. ft. panel of the material you are currently using in almost any application and hit it with a hammer. Chances are you'll see it can't withstand this kind of impact.

Next, try the same experiment with a Versitex panel. See how much tougher it is?



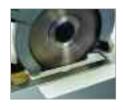


#### Versitex is more that just tough.

The strengths of Versitex extend beyond physical and mechanical properties. It's lighter in weight than just about any material you might consider for the same applications. Still, perhaps its greatest strength is its price. Despite its impressive performance properties, Versitex is priced about the same as conventional fiberglass-reinforced polyester (FRP).

Another strength is its workability. Versitex can be cut to fit using a circular saw and exhibits screw retention characteristics similar to wood. Because Versitex is made using thermoplastic polypropylene, it can be formed, overmolded or welded, with no loss of strength. Versitex is

resistant to rot, corrosion and mildew, and it is not affected by detergents or cleaning chemicals Plus, it is 100% recyclable during and after processing. Versitex can also be used as a protective surface for structures in which foam is used for insulation or to deaden noise and vibration. For these applications, a thin sheet of fabric is added to one side of the sheet during lamination. This "scrim" promotes adhesion of injected or poured foam systems.

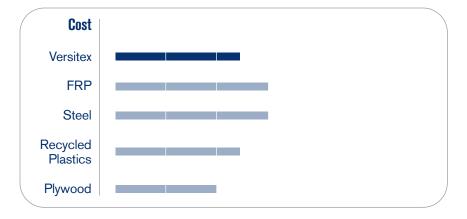


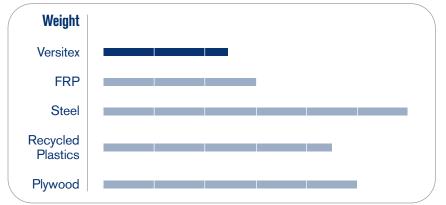
Versitex can be easily cut with a circular saw and exhibits screw retention similar to wood.

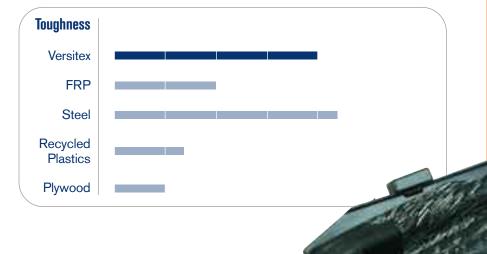
Whatever type or thickness Versitex you choose, it's easy to ship, store, and manage. Depending on the final size and thickness required for an application (from 0.040 inch to 0.200 inch), Versitex can be rolled into coils up to 1,200 feet in length (standard widths of 96 in. or 108 in.) or cut into sheets and palletized.

## Compare Versitex to other materials commonly used in the same applications.

Versitex brings you light-weight impact resistance at an unbeatable price. Versitex is the product of an entirely new manufacturing process that creates a bi-directional thermoplastic composite with excellent physical and mechanical properties, all at a price you simply can't pass up.







Heat/Vacuum Formable

### Three-Dimensional Possibilities

Versitex starts out as a flat
sheet, but it doesn't have to
stay that way. The heat-formed
bumper beam below is typical
of the kind of structures
that are possible. Versitex
sheet can be formed and
overmolded to create additional
structural features. Because
it's made of thermoplastic
polypropylene, Versitex is
not only formable, it's
100% recyclable too.

Continuous
Glass for
Strength

Overmolding Adds Detail

#### DISTRIBUTED BY:

For over 20 years, U.S. Liner Company has been providing composite solutions to solve a variety of protective and structural problems in many different industries. We welcome the opportunity to discuss your specific issues. Contact us at 1-800-USLINER for more information and a free "Hammer Challenge Kit." See for yourself how U.S. Liner products "hammer" the competition.



Versitex is your affordable alternative to fiberglass, plywood, recycled plastics, even aluminum and steel. It offers an ideal combination of performance and price.



For premium performance, consider Bulitex® sheet. Made by laminating woven glass fiber and polypropylene, Bulitex provides maximum energy absorption, reducing cracks and punctures, and exhibits a thermal expansion/contraction value close to aluminum.



19 Leonberg Road • Cranberry Township, PA 16066 • www.USLCO.com

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