



## PRESS RELEASE

19 Leonberg Rd., Cranberry Township, PA 16066 • Phone: 724-776-4044 • Fax: 724-776-4045

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CONTACT: Jeff Meek, U.S. Liner Co, (724) 776-4044, [jmeek@bulitex.com](mailto:jmeek@bulitex.com)  
Scott Collins, Marketing Communications, (216) 382-8840,  
[shcmrcom@attglobal.net](mailto:shcmrcom@attglobal.net)

# New Thermoplastic Composite Sheet Material Is Stronger, Lighter Than FRP; Costs Less

A new laminated thermoplastic composite sheet from U.S. Liner Co., Versitex<sup>®</sup> provides twice the impact protection of conventional fiberglass panels, is lighter in weight and costs less. Available in a wide range of thicknesses and widths, and virtually any length, Versitex sheets are ideal for applications in truck-trailers, cargo and storage containers, building and construction, recreational vehicles, automobiles and military structures and equipment.

Versitex was developed using an entirely new manufacturing process. Non-woven continuous glass fibers are impregnated with polypropylene and laminated to create a thin, tough bi-directional structure that has many benefits:

- Lightweight
- High strength
- Low cost
- Expansion/contraction comparable to aluminum
- Easy to install and repair
- Heat-formable
- Completely recyclable

(More)

“Fiberglass-reinforced thermoset polyester (FRP) has been the material used in many of these applications,” explains Jeff Meek, Director of Sales & Marketing. “It is superior to wood in most cases, but that’s about it. Then, in 2000, U.S. Liner developed Bulitex<sup>®</sup>, a thermoplastic composite using woven glass as the reinforcement and this material has become the gold-standard for impact resistant panels. The only thing preventing Bulitex from making FRP entirely obsolete has been the price. It is a premium product at a premium price. Finally, though, there is another choice called Versitex. Versitex will become the new high-performance standard, replacing FRP, plywood, recycled plastics, oak, steel, and aluminum.”

The thermoplastic properties of Versitex panels provide significant energy absorption, reducing cracks and punctures. Versitex is superior to all conventional materials used in similar applications, yet it costs less. Compared to other materials, 0.080-inch-thick Versitex V4 is lighter in weight and many times tougher than plywood. Versus FRP that is four times as thick, Versitex is at least twice as tough, lighter in weight and is priced competitively.

Laboratory testing found multi-axial impact strength of 10.8 ft-lbs for Versitex V4. Other key mechanical properties include: tensile strength of 33.5 KSI; tensile modulus of 1.5 MSI; and tensile elongation of 2.6%. The thermal expansion/contraction values ( $10^{-6}$  inch/degree F) are comparable to those of aluminum. In addition, Versitex resists rot, corrosion and mildew and is not affected by cleaning chemicals.

Versitex sheet is available in a variety of thicknesses and widths up to 108 inches. It is normally supplied in bulk coils up to 1200 ft. It can be cut using a circular saw with carbide-tipped blade and can easily be sheared, routed or drilled for simple installation. And, because it is made using thermoplastic polypropylene, it can be formed into even complex shapes or welded, with no loss of strength.

Headquartered near Pittsburgh, in Cranberry Township, PA, U.S. Liner Company, is a division of American Made, LLC, which was founded in 1983. Since 1998, the company has been a leading supplier of composite materials that are widely used in the truck/trailer market and supports an ever-widening range of applications in the automotive, RV, rail and intermodal transportation, building products, and military markets.