

Lighter. Stronger. Smarter.

ArmorONE® Panels

For Semi-Trailers and Box Trucks



ARMORY TECHNOLOGIES

■ Origami Composites™

The Technology to Transform™

Developed through R&D contracts with NASA and the National Science Foundation, Origami Composites are a new class of materials that rely on geometry and mechanical engineering to improve material performance.

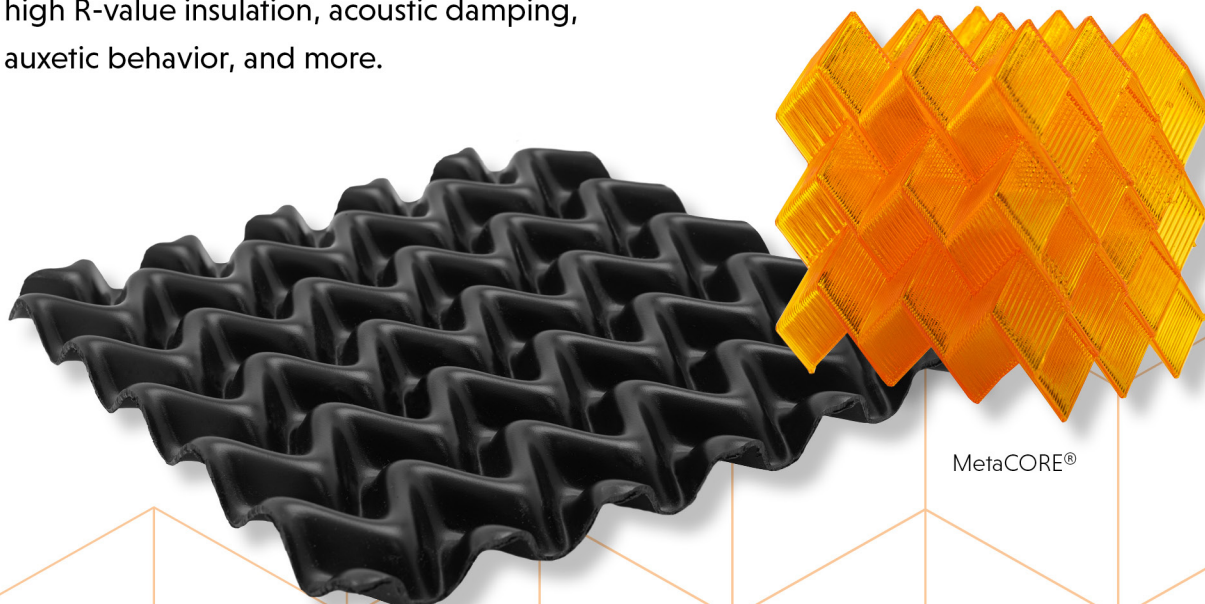
Origami Composites are distinct in their ability to incorporate a spectrum of performance characteristics to address some of manufacturing's most pressing material challenges. Lighter can be stronger. Stronger can be thinner. Thinner can be stiffer.

Inspired by the science of folding paper to impart structure, Origami Composites are engineered with geometric structure to achieve advanced functionality such as elasticity, impact and energy absorption, vibration control, thermal management, high R-value insulation, acoustic damping, auxetic behavior, and more.

Origami Composites are made substantially lighter and stronger by imparting structure without increasing density in the base material. Their geometric configuration distributes weight and force, enabling common materials to conform, convey, and withstand uncommon stress. In the context of material science, they are a faster, easier, more economical alternative to molecular or chemical engineering.

ArmorONE® Panels are fabricated with Origami Composites at their core. Engineered to meet the unique demands of road transportation, these performance panels are not just lighter, but stronger, and smarter.

Contact us to request a sample:
ArmorONE@armorytechnologies.com



MetaCORE®

The New Standard for Strength and Lightweighting

Armory Technologies is dedicated to providing innovative, affordable solutions to our customers, using ground-breaking technology that transforms common materials into a competitive advantage.

For trailer and box truck owners, operators, and manufacturers, we are raising the standards of performance and value with our flagship panel product, ArmorONE.

Engineered with our patented Origami Composite MetaCORE® technology, ArmorONE Panels deliver unrivalled lightweighting with strength and durability.

Tough-skinned, rugged, and built to last, ArmorONE panels are the new standard for strength and lightweighting in trucking.





Optimized for Truck Transportation

With demand for more goods, denser freight, increasingly heavier vehicles, higher fuel costs, and electrification, affordable lightweighting is now essential.

ArmorONE composite panels reduce weight, while improving shear strength and stiffness in dry van trailers and box trucks. ArmorONE Panels are American-

made using domestic materials and a thermoformed Origami Composite™ core that is moisture-resistant.

Durable, economical, and sustainable, ArmorONE Panels deliver a competitive advantage and immediate ROI for fleets.

Applications

- Sidewall panels
- Swing door panels
- Roll-up door panels
- Floor panels

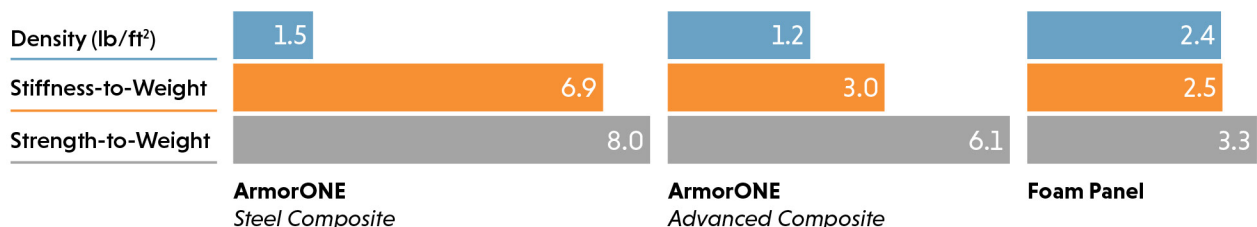
Nominal Dimensions

- Thickness: 6 - 25 mm
- W x L: 48 x 107 in



Smarter Cores. Better Panels.

Origami Composites are less dense and offer higher stiffness- and strength-to weight ratios compared to foam panels.



ArmorONE Steel Composite Wall Panels

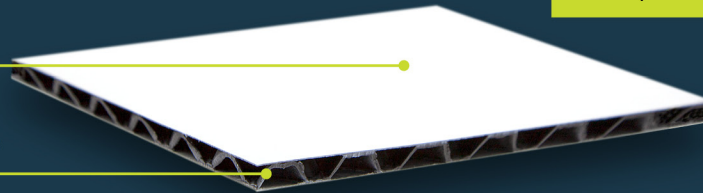
For maximum-strength lightweighting, ArmorONE utilizes steel skins of the highest strength to withstand the most demanding conditions.

42% lighter with five times the strength-to-weight of standard foam panels.

High Strength Steel

Class-A UV Gloss Finish

Thermoplastic MetaCORE®

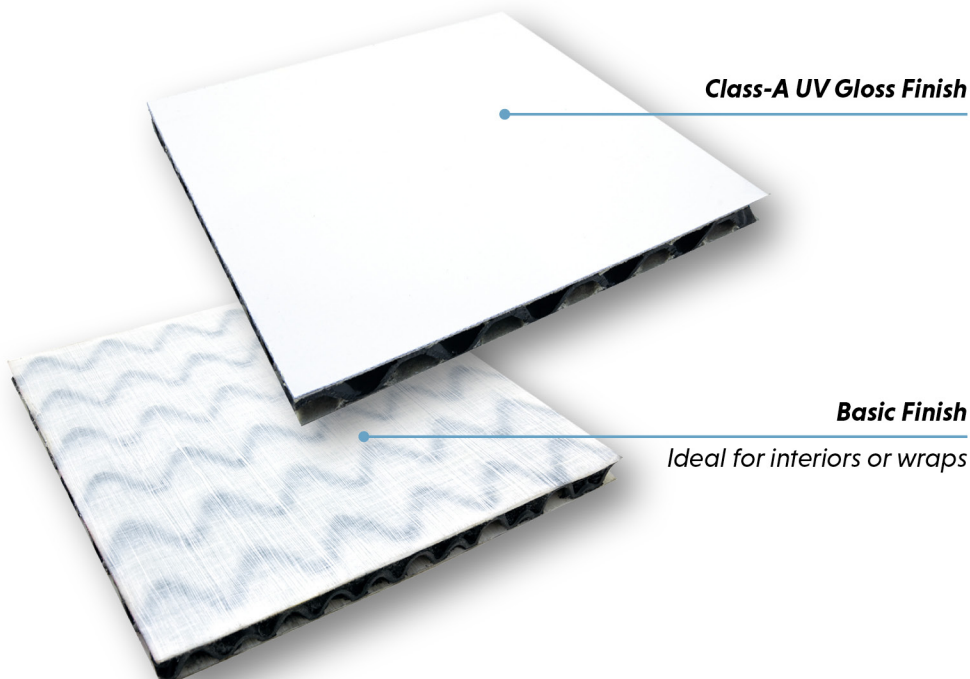


ArmorONE Advanced Composite™ Wall Panels

For ultra-lightweight advantage, ArmorONE Advanced Composite Panels are engineered with mechanical properties optimized for transportation applications. Advanced Composite is a proprietary engineered material composed of a thermoplastic matrix interwoven with continuous glass filaments. It is ideally suited for dry vans and box trucks using mechanical fastener and adhesive attachment methods.

59% lighter compared to standard foam panels.

Save up to **2,000 lb** (53' trailer) or **800 lb** (26' box truck) with Advanced Composite.



Class-A UV Gloss Finish

Basic Finish

Ideal for interiors or wraps

Advanced Composite vs. Fiberglass

Advanced Composites are stronger and easier to work with. Fiberglass and FRP are old technologies comprised of a thermoset with crushed glass particles or fibers, forming a permanently hardened chemical bond when cured. They are non-recyclable, impossible to re-mold, and require sanding to repair. Advanced Composites are easily patched and repaired with heat and remolding, a method that avoids dangerous airborne particles and reduces lifetime cost (maintenance versus replacement).

MetaCORE®

The Origami Composite™ Advantage

Origami Composites are gaining traction where weight savings matter.

From wall panels, to roll-up and swing door panels, to flooring and beyond, MetaCORE delivers a competitive advantage over conventional wood and foam cores:

- Up to 59% weight savings for improved efficiency and driver ergonomics
- Higher shear strength- and stiffness-to-weight ratios
- High R-values for insulation and thermal management
- Waterproof and impervious to salts and corrosion
- Extended life without the degradation seen in wood and foam



Be a First Mover

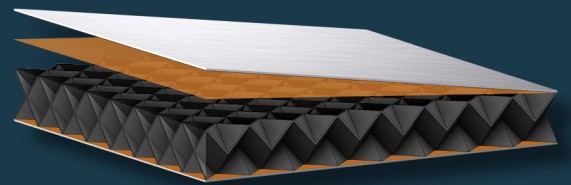
Give your customers a competitive advantage with ArmorONE Panels.

Join our Pilot Program

Let us tailor a pilot to your specifications.

Ask us about licensing

License MetaCORE technology for your application.



Sustainable Solutions



Recycled Materials

Origami Composite cores use up to 50% recycled materials. Our closed loop system ensures 100% of polymer is re-ground and re-used.



For the Planet

Reduced environmental footprint by manufacturing in the U.S. using 100% domestic materials and no harmful foam-blowing agents.



More Efficient

Lighter panels make lighter trailers for greater fuel efficiency and fewer emissions.



Electric Vehicles

Lighter panels promote electrification by offsetting battery weight.

USA Made

ArmorONE Panels are manufactured in the United States using only domestically-sourced materials—supporting American manufacturing and reducing risk and reliance on international supply chains.





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ARMORY TECHNOLOGIES

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