



» PRODUCT BULLETIN

CRTM™ (Continuous Resin Transfer Molding) Reinforced Composite Sandwich Panels

Lightweight, high-performance metal replacement solution

PRODUCT DESCRIPTION

Lightweight CRTM panels are custom engineered, high quality composite sandwich panels designed to deliver the structural benefits of metal panel systems. Tailored to customer design and performance specifications, panels are engineered with custom formulated resins, structural core materials, and fibers to achieve specific stiffness, strength, weight, performance and cost targets.

VALUE SOLUTION

Improve quality, reduce weight and lower manufacturing costs with CRTM panels

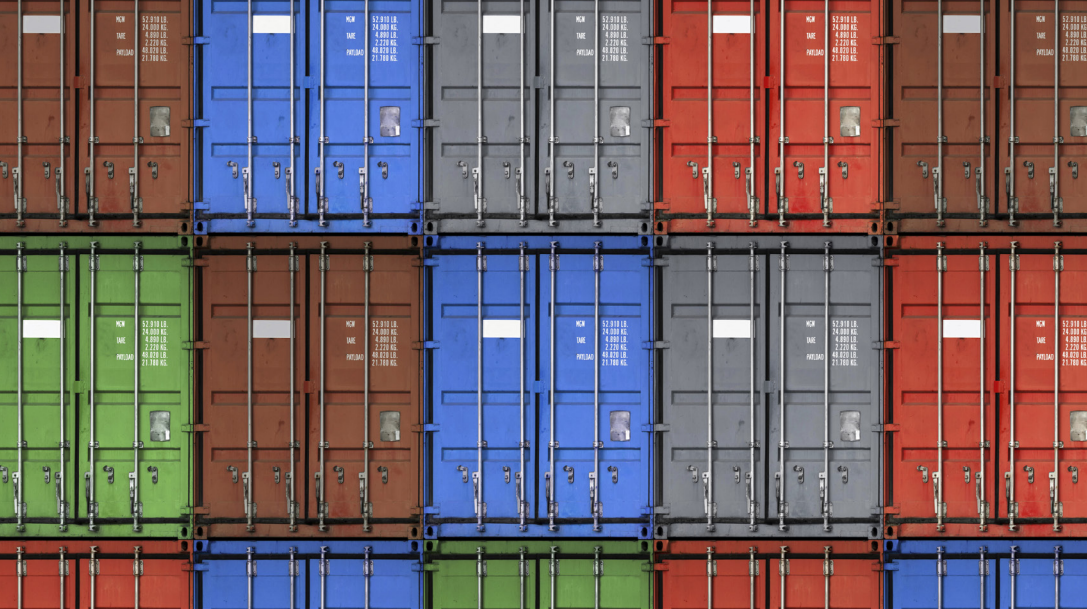
Sandwich panels manufactured with the CRTM automated pultrusion process demonstrate consistent mechanical properties with superior strength, and are well suited for a wide variety of applications. The unique manufacturing process yields uniform quality throughout the panel, ensuring complete resin impregnation, high fiber volume content, low void content, uniform thickness, and core bonding throughout. Panels can be designed to be up to 75% lighter than steel, and 25% lighter than aluminum skin over frame systems. An engineered panel can reduce system costs through elimination of welding, drilling,

bolting and riveting typically associated with metallic panel fabrication. Unlimited lengths and a continuous manufacturing process also provide significant cost savings over traditional composite panel manufacturing techniques.

KEY CHARACTERISTICS

Avient CRTM panels offer significant benefits to customers, including:

- Superior strength to weight ratio
- Unlimited length capability; widths up to 108"
- Thermal insulation
- Ultra-low thermal conductivity
- Customized density, thickness, weight and color
- Vibration damping and acoustic insulation
- Chemical and corrosion resistance
- Consistent cross-sections and quality



Additional features include:

- Material and design flexibility
- Large-scale production with in-line CNC machining
- Class-A FS&T resin systems
- Product design guidance

MARKETS AND END-USE APPLICATIONS

CRTM composite panels are ideal for use in markets where metal skin-over-frame or hand-laid composite sandwich panels are currently used.

These include:

BUILDING AND CONSTRUCTION

Prefabricated structural units, and structure siding and flooring, shelter panels

DEFENSE

Ballistic resistant panels for military, architectural, power grid and sensitive asset protection. Composite panels for modular ISO shelters, transport containers and pallets

TRANSPORTATION

Rail car doors, floors and body panels, shipping containers, tractor trailer panels, large trucks, trailers, RVs, and mass transit vehicles

MARINE

Structural bulkheads, transoms, decks/soles, subflooring, and interior walls

CRTM PANEL PROPERTIES

Panel Thickness (in.)	Areal weight (lbs./sq. ft.)
0.54"	1.2
0.75"	1.4
2.24"	3.1

Other thicknesses/architectures are available.

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