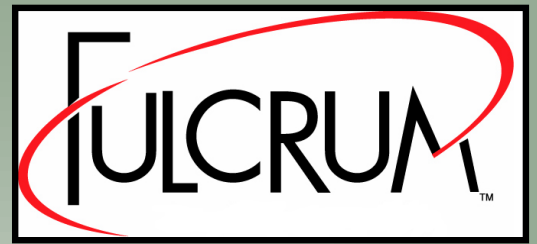


Fulcrum Micro-Comb™

Fulcrum Micro-Comb Sandwich Panels utilize a proprietary foam core to achieve high mechanical performance at moderate cost. Our flexible production techniques allow panels to be customized to each customer's design requirements - including curved, and thermo-formed configurations. Panels are available with a wide variety of skin options, ranging from plywood to FRP and steel.



Fulcrum Composites, Inc.
1407 E. Grove St.
Midland, MI 48640

Ph: 989-636-1025
Fax: 989-837-1566

www.fulcrumcomposites.com



Why Sandwich panels?



	Solid Material	Core Thickness t	Core Thickness $3t$
Stiffness	1.0	7.0	37.0
Flexural Strength	1.0	3.5	9.2
Weight	1.0	1.03	1.06

The structural advantage of sandwich panels is well known: High performance skins separated by a lightweight core allow stiffness to weight ratios many times higher than is possible with a solid material.

Panel Attributes

- High strength and stiffness
- Lightweight
- Wide variety of skin options
- Excellent insulating properties (R-5/inch)
- Curved or flat
- Water impervious (closed cell foam)
- Tough & Ductile
- Non-conductive
- Electromagnetic transparency



Call us with your panel requirements, and we will engineer a solution to meet your needs.

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* Fulcrum and Micro-Comb are trademarks of Fulcrum Composites, Inc.

Why Fulcrum Micro-Comb panels?



Fulcrum Micro-Comb is a high-mechanical property, structural foam for use in sandwich panel cores. The unique composition of the foam produces a product that is light – under 3.0 lbs/cubic foot – yet with exceptional shear stiffness and compressive strength. These properties make the foam ideally suited for a sandwich panel core – achieving rigid, lightweight sandwich compositions at affordable price points.

Other key benefits of Fulcrum Micro-Comb

Formable – Specialized forming techniques allow the foam to be formed for the creation of curved and 3-D shapes.

Damage Resistance – The high ductility and resilience of Fulcrum Micro-Comb results in sandwich structures which continue to exhibit a high percentage of their original properties even after the skin laminate has failed locally, or in compression.



Thermal Insulation - Fulcrum Micro-Comb has an R-value of 5, making it comparable to most standard insulating foams. The closed cell structure and high moisture resistance ensure that the thermal insulation is maintained over time – unlike PU foam which degrades with exposure to moisture.

Ease of Fabrication – Fulcrum Micro-Comb is easily fabricated with conventional foam cutting equipment; and Fulcrum’s in-house CNC cutting capabilities enable a wide range of cut-to-shape parts - including curved and tapered sections - all with accurate tolerances and repeatability.



Environmentally Friendly – Fulcrum Micro-Comb is totally recyclable; and no CFC’s are used in it’s production.

Edge Closures – A variety of protective edge closures can be applied to the panels as they are manufactured.

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Panel Skin Options



Multiple skin options available to balance price, performance, durability & aesthetics.

Skin Type	Strength	Stiffness	Toughness	Aesthetics	Moisture & Corrosion	Cost
Thermoset Composite (FRP)	High	High	High	Good	Good	Medium
Thermoplastic Composite	High	High	High	Fair	Good	High
High Pressure Laminate	Medium	Medium	Medium	Excellent	Good	Low
Aluminum	High	High	Medium (dent prone)	Fair-Excellent	Good	High
Plywood	Medium	Medium	Low	Fair-Excellent	Fair	Low
Steel	High	High	High (dent prone)	Fair-Excellent	Fair	Medium
Thermoplastic Sheet	Low	Low	Medium	Excellent	Good	Medium

Panels available from ¼" to 4" thick. Standard flat panels are 4' x 8'. Curved panels, and larger sizes by special order.



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