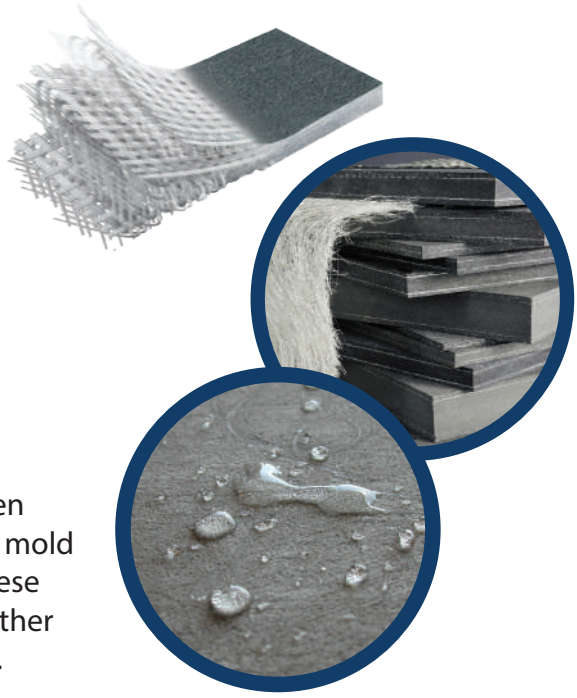
Coosa Bluewater Panels

Fiber-Reinforced Structural Foam Panel



DESCRIPTION

Coosa's Bluewater panels are made from closed-cell polyurethane foam and reinforced with multiple layers of fiberglass, creating a board with high flexural strength and stiffness.

The unique manufacturing process evenly distributes continuous fiberglass as well as woven layers of fiberglass throughout the foam. This generates a product with enhanced mechanical properties and extreme durability.

Bluewater panels are dimensionally stable, do not lose strength when wet, and have excellent bonding characteristics. They are resistant to mold and mildew, chemicals, high temperatures, and insect infestation. These properties make Coosa panels an ideal replacement for plywood or other core materials in numerous applications across a variety of industries.

CHARACTERISTICS

- *High flexural strength and stiffness*
- *Non-absorbent*
- *Lightweight and strong*
- *Good screw retention*
- *Compatible with a wide range of resins and adhesives*
- *Dimensionally stable*
- *Mold and mildew resistant*
- *High shear and compression properties*
- *High heat resistance*
- *Self extinguishing (meets FMVSS 302 for flammability)*

Dimensions: 4'x8' up to 5'x12'
Thicknesses: ¼" up to 2"
Densities: 20#, 26#, 32#

CUSTOMER PROCESSES

- *Contact molding (hand/spray)*
- *Resin infusion / injection (VARTM / RTM)*
- *Adhesive bonding*
- *Pre-preg*
- *Press / compression molding*

APPLICATIONS

Transportation
- Sub-flooring
- Walls
- Cabinetry
- Portable restroom components

Construction
- Walls
- Flooring
- Doors
- Cabinetry
- Decorative elements
- Exterior cladding

Marine
- Transoms
- Stringers
- Decking
- Hatch lids
- Bulkheads
- Deck furniture

Recreational Vehicles
- Sub-flooring
- Cabinetry
- Drop-down elements
- Ramps
- Slide-outs

MADE IN USA

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COOSA COMPOSITES

MECHANICAL PROPERTIES

Typical properties for Bluewater panels		Unit (imperial)	Bluewater 20	Bluewater 26	Bluewater 32
Density	ASTM C-271 ISO-845	lb/ft^3	20	26	32
Core Compressive (Strength)	ASTM C-365 ISO-844	psi	655	1,015	1,581
Core Compressive (Modulus)	ASTM C-365 ISO-844	psi	22,603	35,407	54,969
Flatwise Tensile (Strength)	ASTM C-297	psi	536	549	562
Flatwise Tensile (Modulus)	ASTM C-297	psi	14,125	18,375	53,228
Core Shear (Strength)	ASTM C-273 ISO 1922	psi	363	504	648
Core Shear (Modulus)	ASTM C-273 ISO 1922	psi	12,744	18,618	27,412
Flexural Properties (Strength)	ASTM D-790	psi	3,525	4,848	5,538
Flexural Properties (Modulus)	ASTM D-790	psi	224,273	266,238	278,169
Screw Retention*	ASTM D1761	lbf	321	351	580
Standard Sheet	Width	in	48	48	48
	Length	in	96	96	96
	Thickness	in	3/8 to 2	1/4 to 2	1/4 to 2

All properties evaluated on ¾" rigid sheet; other thickness will have similar performance based on that specific sheet density.
Flexural testing support span ratio 16:1. **fastener type #12 sheet metal screw*

THERMAL RESISTANCE

The R value of ½" Bluewater 26 is 1.3

The R value of 1" Bluewater 26 is 2.5

DIELECTRIC STRENGTH

Coosa ¼" Bluewater 32 passed ASTM D149 testing up to 39,000 volts

PANEL COMPARISON (A general comparison of 4' x 8' x 3/4" composite panels.)

	Coosa Composites	Marine Grade Plywood	Engineered OSB	Plastic Honeycomb
Weight	***Bluewater 20*** - 40 lbs. ***Bluewater 26*** - 52 lbs. ***Bluewater 32*** - 64 lbs.	Approx. 70 lbs.	Approx. 78 lbs.	Usually less than plywood but depends on construction
R-Value	2-3 times the R-value of plywood	Less than half of Coosa	Less than half of Coosa	Depends greatly on the construction of the panel
Dimensionally Stable	Yes	No	No	Usually
Resists Rot and Mold	Yes	No	No	Yes

Important! The information and data presented herein are based upon information reasonably available to Coosa Composites Holdings, LLC from independent testing labs at the time of publication and are presented in good faith, but are not to be construed as guarantees or warranties, express or implied, regarding performance, results to be obtained from use, comprehensiveness, and merchantability. You should thoroughly test any application, and independently determine satisfactory performance before commercialization or use.

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