

lawn & garden market



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BMC and SMC are gaining acceptance in outdoor residential applications, as the materials offer both structural and aesthetic benefits. Outdoor barbecue grills are a prime example. Large manufacturers have converted traditional wood side shelves to a single-mold BMC. The molded side shelves are UV-resistant, corrosion-resistant, easy to clean, and have the highest UL flame retardant certification. The aesthetic appeal of the material is a major selling point, as it can be molded in a wide variety of colors.

Small engines for lawnmowers and snow blowers now feature BMC material for numerous components, including valve covers and aspirator tubes. BMC is also used for seats for riding equipment, instrument panels, and headlamps where molded-in color helps both aesthetics and reflectance.

BMC is also used for pool and patio furniture because it is sturdy, UV- and stain-resistant, and can be easily cleaned.

Key properties of BMC that make it appealing over traditional materials:

- **Structural rigidity and weight** for furniture and mowers
- **Resistance to natural elements**, such as UV and acid rain
- **Ability to mold to net shape** due to zero shrinkage
- **Ability to tolerate powder-coat or water-based paint** to address the varied consumer market

engineered for performance

Property	Unit	Test Method	44-1	44-10	M-205	C-204
Physical and Mechanical Properties						
Impact Strength	FT-LBS/IN	ASTM D 256	3-4	4-5	13	12
Flexural Strength	PSI	ASTM D 790	15-18,000	15-17,000	28,000	26,000
Flexural Modulus	10 ⁶ PSI	ASTM D 790	1.9	--	1.8	1.8
Tensile Strength	PSI	ASTM D 638	5-7,000	6,000	13,000	10,000
Compressive Strength	PSI	ASTM D 695	22,000	21,000	28,000	27,000
Water Absorption	%	ASTM D 570	0.15	0.15	0.10	0.08
Specific Gravity	G/CM ³	ASTM D 792	1.95	1.96	1.78	1.80
Shrinkage	IN/IN	ASTM D 955	0.001-0.003	0.001-0.003	0.001	0.001
Hardness	Barcol	ASTM D 2583	30-40	40-50	40-50	40-50
Bulk Factor App.	--	ASTM D 1895	1	1	1	1

Electrical Properties

Dielectric Strength	KV/IN	ASTM D 149	270	--	380	430
Arc Resistance	Seconds	ASTM D 495	180+	180+	--	--

Thermal and Flame Retardant Properties

Heat Deflection Temperature @264PSI	°F	ASTM D 648	>500	>500	>500	>500
Flame Resistance	--	UL 94	--	--	--	--
	@ 1/16"	--	94-HB	94-HB	94-HB	94-HB
	@ 1/8"	--	94-HB	94-5V	94-HB	94-HB
	@ 1/4"	--	94V-0	94-5V	94V-0	94-HB

IDI Composites International is the premier global formulator and manufacturer of thermoset molding compounds for custom molders and OEMs. The company provides customized polyester/vinylester-based bulk molding compounds (BMC) and sheet molding compounds (SMC) for the world's most demanding markets, including automotive/truck, electrical, food service, alternate energy, and appliance.

Headquartered in a 200,000 square foot facility in Noblesville, IN (USA), IDI has a strong presence in the international thermoset composites market. To support a growing customer base world-wide, the company operates multiple wholly-owned manufacturing facilities in Europe, Asia, and The Americas.

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