GURIT CORECELL™ M

STRUCTURAL FOAM CORE

Gurit® Corecell™ M is the high-performance foam, featuring extremely high resistance to impact, slamming and fatigue, suitable for all marine applications across all sectors. Combining high static properties, unmatched toughness, and compatibility with infusion, prepreg, SPRINT™ and wet lamination processes.

Environmental stability - High tolerance for heat and chemical exposure.

Fine cell size - Resin absorption is very low, saving both weight and cost.

Superior uniformity - Low density variation

Eliminating outgassing - Gurit® Corecell™ eliminates the problems of foam outgassing.

Compatibility - Suitable for use with all polyester, vinylester and epoxy resins

No inhibition - Gurit® Corecell™ does not inhibit any epoxy resin curing mechanisms.

Handling - Tough and easy to machine.

Gurit® Corecell™ M has been developed to deliver ONE product for ALL MARINE APPLICATIONS. It provides a combination of high shear strength with low density, high elongation, high temperature resistance and low resin uptake. Gurit® Corecell™ M is the perfect choice whether your application is slamming area or superstructure, hull or deck, using hand lamination, infusion or prepreg.

If looking for reliable processing, Gurit® Corecell™ M delivers through the benefits recognized in all Gurit® Corecell™ products of fine cell size and unique knife-cuts giving low resin uptake in infusion processes. For prepreg, Gurit® Corecell™ M offers high temperature resistance to allow shorter cure cycles and the confidence to process without fear of inhibition of prepreg catalysis. Where static properties are important, Gurit® Corecell™ M delivers high shear strength at a low density. Where dynamic performance is crucial, the high elongation delivers higher useful properties and the toughness to give impact resistance and superior fatigue performance. Gurit® Corecell™ M is available in resin infusion format and is compatible with polyester, vinylester and epoxy resin systems. The low resin absorption characteristics of Gurit® Corecell™ and it's unique knife cut formats deliver higher performing infusions, low resin cost and low weight. Gurit's global technical team have 10 years' experience in resin infusion, hand lamination and prepreg processing and offer on-site support and structural engineering for Gurit® Corecell™ customers. This combination makes Gurit® Corecell™ a key part of a reliable package.

- High elongation for toughness
- High shear strength combined with low density.
- Replacement for PVC cores
- Suitable for all composite processes including prepreg.
- Compatible with epoxy, polyester and vinyl ester resin systems
- Available at 60, 80, 100, 130 and 200 kg/m^3 density
- Available with all standard finishes and unique knife cut options.
- Benefits from DNV, RINA, ABS, Lloyds, BV, and IRS certifications

INSTRUCTIONS FOR USE

General working practices apply to these products, details of which can be obtained from the Gurit Guide to Composites at www.gurit.com

MECHANICAL PERFORMANCE

TYPE	TEST METHOD	UNITS	Corecell™ M-60		Corecell™ M-80		Corecell™ M-100		Corecell™ M-130		Corecell™ M-200	
Short Edge Marking	–	-	Yellow	Green	Yellow	Blue	Yellow	Black	Yellow	Pale Brown	Yellow	Brown
Nominal Sheet Size	–	mm	1285 x 2605		1220 x 2440		1130 x 2275		1015 x 2045		915 x 1830	
		Inches	50.5 x 102.5		48 x 96		44.5 x 89.5		40 x 80.5		36 x 72	
Unbonded Thickness Range (Tolerance)	-	mm	3 – 55 (+/-0.5)		3 – 53 (+/-0.5)		3 – 48 (+/-0.5)		3 – 46 (+/-0.5)		3 – 32 (+/-0.5)	
		Inches	1/8 - 2 (+/-0.02)		1/8 - 2 (+/-0.02)		1/8 - 1 7/8 (+/-0.02)		1/8 – 1 3/4 (+/-0.02)		1/8 – 1 1/4 (+/-0.02)	
Nominal Density	ISO845	kg/m³	65		85		107.5		140		200	
		lb/ft³	4.1		5.3		6.7		8.7		12.5	
Density Range	-	kg/m³	61 - 69		81 - 89		100 - 115		130 - 150		185 - 215	
		lb/ft³	3.8 – 4.3		5.1 – 5.6		6.2 – 7.2		8.1 – 9.4		11.5 – 13.4	
Compressive Strength	ASTM D1621 /ISO844	MPa	0.69		1.16		1.72		2.58		4.40	
		psi	100		168		249		374		638	
Compressive Modulus	ASTM D1621 – 1973 / ISO844	MPa	48		78		112		169		317	
		psi	6962		11313		16244		24511		45977	
Shear Strength	ASTM C273	MPa	0.78		1.15		1.47		1.96		2.95	
		psi	113		167		213		284		428	
Shear Modulus	ASTM C273	MPa	23		34		44		60		98	
		psi	3336		4931		6382		8702		14214	
Shear Elongation at break	ASTM C273	%	57		57		50		40		30	
Tensile Strength	ASTM D1623	MPa	1.21		1.74		2.23		3.00		4.29	
		psi	175		252		323		435		622	
Tensile Modulus	ASTM D1623	MPa	67		98		134		186		334	
		psi	9717		14214		19435		26977		48443	
Thermal Conductivity	ASTM C518	W/mK	0.03		0.04		0.04		0.04		0.04	
Heat Distortion Temperature (HDT)	DIN 53424	°C	110		110		110		110		110	
		°F	230		230		230		230		230	

NOTICE

All advice, instruction or recommendation is given in good faith but the selling Gurit entity (the Company) only warrants that advice in writing is given with reasonable skill and care. No further duty or responsibility is accepted by the Company. All advice is given subject to the terms and conditions of sale (the Conditions) which are available on request from the Company or may be viewed at Gurit's Website: www.gurit.com/terms-and-conditions.aspx

The Company strongly recommends that Customers make test panels in the final process conditions and conduct appropriate testing of any goods or materials supplied by the Company prior to final use to ensure that they are suitable for the Customer's planned application. Such testing should include testing under conditions as close as possible to those to which the final component may be subjected. The Company specifically excludes any warranty of fitness for purpose of the goods other than as set out in writing by the Company. Due to the varied nature of end-use applications, the Company does, in particular, not warrant that the test panels in the final process conditions and/or the final component pass any fire standards.

The Company reserves the right to change specifications and prices without notice and Customers should satisfy themselves that information relied on by the Customer is that which is currently published by the Company on its website. Any queries may be addressed to the Technical Services Department.

Gurit is continuously reviewing and updating literature. Please ensure that you have the current version by contacting your sales contact and quoting the revision number in the bottom left-hand corner of this page.

CONTACT INFORMATION

Please see local contact information at www.gurit.com

24-HOUR CHEMICAL EMERGENCY NUMBER

For advice on chemical emergencies, spillages, fires or exposures:

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