

### The high performance sandwich core

Divinycell HM is a high performance structural core designed for fast marine hulls where higher toughness is required.

Divinycell HM combines a very high shear strength with an outstanding shear elongation. As a result, Divinycell HM is an extremely tough product, capable of absorbing high dynamic impacts and slamming loads.

Divinycell HM's elongation exceeds the requirements of ISO 12215,

GL and ABS rules to allow for reduced safety factors in structural calculations, providing a lighter, yet strong structure.

Divinycell HM's high compressive properties provide excellent resistance to denting and skin wrinkling of thin skins.

Divinycell HM offers a high operating temperature, thus reducing the risk of print through on dark hulls.

### Mechanical properties Divinycell® HM - Imperial units

Property	Test Procedure	Unit		HM80	HM100	HM130
Compressive Strength <sup>1</sup>	ASTM D 1621	psi	Nominal	203	290	435
			Minimum	167	239	348
Compressive Modulus <sup>1</sup>	ASTM D1621-B-73	psi	Nominal	14,504	19,580	24,656
			Minimum	11,603	16,679	21,030
Shear Strength	ASTM C 273	psi	Nominal	167	232	319
			Minimum	139	203	276
Shear Modulus	ASTM C 273	psi	Nominal	3,916	5,076	7,252
			Minimum	3,191	4,061	5,802
Shear Strain	ASTM C 273	%	Nominal	41	41	41
Density	ISO 845	lb/ft <sup>3</sup>	Nominal	5.0	6.2	8.1

All values measured at +73.4°F

1. Properties measured perpendicular to the plane

*Nominal value* is an average value of a mechanical property at a nominal density

*Minimum value* is a minimum guaranteed mechanical property a material has independently of density

Maximum processing temperature for Divinycell HM is +230°F. It is dependent on time, pressure and process conditions. Therefore users are advised to contact Diab Technical Services to confirm that Divinycell HM is compatible with their particular processing parameters.

### Product Characteristics

- Outstanding toughness and fatigue resistance
- Superior shear strength
- High compressive strength and stiffness
- Excellent chemical resistance
- High temperature resistance
- Compatible with all resins used in marine
- Low resin absorption

Divinycell HM is type approved by:



# Technical Characteristics

## Physical characteristics

Format		Unit	HM80	HM100	HM130
Plain sheets	Length	inch	96.06	85.04	77.17
	Width	inch	48.03	42.13	38.19
	Max unbonded thickness <sup>1</sup>	inch	3.15	2.95	2.83
GS sheet	Length	inch	48.03	42.52	38.58
	Width	inch	32.01	42.13	38.19

1. Minimum thickness is 0.12 inch

### Disclaimer:

This data sheet may be subject to revision and changes due to development and changes of the material. The data is derived from tests and experience. If not stated as minimum values, the data is average data and should be treated as such. Calculations should be verified by actual tests. The data is furnished without liability for the company and does not constitute a warranty or representation in respect of the material or its use. The company reserves the right to re-lease new data sheets in replacement.

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