

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

Property	Test Procedure	Unit		HM80	HM100	HM130
Compressive Strength ¹	ASTM D 1621	MPa	Nominal	1.4	2.0	3.0
			Minimum	1.15	1.65	2.4
Compressive Modulus ¹	ASTM D1621-B-73	MPa	Nominal	100	135	170
			Minimum	80	115	145
Shear Strength	ASTM C 273	MPa	Nominal	1.15	1.6	2.2
			Minimum	0.96	1.4	1.9
Shear Modulus	ASTM C 273	MPa	Nominal	27	35	50
			Minimum	22	28	40
Shear Strain	ASTM C 273	%	Nominal	41	41	41
Density	ISO 845	kg/m ³	Nominal	80	100	130

All values measured at +23°C

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 +110°C. 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	mm	2440	2160	1960
	Width	mm	1220	1070	970
	Max unbonded thickness ¹	mm	80	75	72
GS sheet	Length	mm	1220	1080	980
	Width	mm	813	1070	970

1. Minimum thickness is 3 mm

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 release new data sheets in replacement.

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