



## TECHNICAL DATA

# Divinycell Matrix

### THE HIGH PERFORMANCE SANDWICH CORE

Divinycell Matrix is an all purpose grade with high strength to weight ratio. The unique PVC chemical structure, yields impressive mechanical performance to a low weight. Divinycell Matrix delivers relevant mechanical properties and valuable material characteristics.

Divinycell Matrix is well integrated in the Diab offering and is available in various finishing options as well as kits.

### MECHANICAL PROPERTIES DIVINYCELL® MATRIX

Property	Test Procedure	Unit		<b>MX 10-8</b>
Compressive Strength <sup>1</sup>	ASTM D 1621	psi	Nominal	145
			Minimum	121
Compressive Modulus <sup>1</sup>	ASTM D1621-B-73	psi	Nominal	13,780
			Minimum	10,442
Tensile Strength <sup>1</sup>	ASTM D 1623	psi	Nominal	304
			Minimum	246
Tensile Modulus <sup>1</sup>	ASTM D 1623	psi	Nominal	14,503
			Minimum	10,887
Shear Strength	ASTM C 273	psi	Nominal	121
			Minimum	102
Shear Modulus	ASTM C 273	psi	Nominal	3,190
			Minimum	2,756
Shear Elongation	ASTM C 273	%	Nominal	25
Density	ISO 845	lb/ft <sup>3</sup>	Nominal	3.74

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

### PRODUCT CHARACTERISTICS

- High strength to weight ratio
- Very good peel strength
- Compatible with all main resin types
- High thermal stability
- Small cell size
- Low water absorption
- Good insulation properties
- Low resin uptake
- Consistent and homogenous



# TECHNICAL CHARACTERISTICS

## TECHNICAL CHARACTERISTICS DIVINYCELL® MATRIX

Characteristics <sup>1</sup>	Unit	MX 10-8	Test method
Density variation	%	+15/-10%	-
Thermal conductivity <sup>2</sup>	Btu x in / (ft <sup>2</sup> x h x °F)	TBD	EN 12667
Coeff, linear heat expansion	x10 <sup>-6</sup> /°F	22.2	ISO 4897
Continuous temp range	°F	-325 to +160	-
Max process temp	°F	+230	-
Dissipation factor	-	TBD	ASTM D 2520
Dielectric constant	-	TBD	ASTM D 2520

1. Typical values
2. Thermal conductivity at +68°F

Continuous operating temperature is typically -325°F to +160°F. The foam can be used in sandwich structures, for outdoor exposure, with external skin temperatures up to +185°F. For optimal design of applications used in high operating temperatures in combination with continuous load, please contact Diab Technical Services for detailed design instructions.

Maximum processing temperature is dependent on time, pressure and process conditions. Therefore users are advised to contact Diab Technical Services to confirm that Divinycell Matrix is compatible with their particular processing parameters.

## PHYSICAL CHARACTERISTICS DIVINYCELL® MATRIX

Format		Unit	MX 10-8
Plain sheets	Length	inch	96.0
	Width	inch	48.0
GS sheet	Length	inch	48.0
	Width	inch	48.0
GS sheet	Length	inch	48.0
	Width	inch	32.0

**Divinycell Matrix is type approved by:**



**Disclaimer:**

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