

The high performance PET sandwich core

Divinycell PN is a structurally strong thermoplastic sandwich core material perfectly suited in a variety of applications to increase their performance and to decrease their weight. Its material characteristics makes it easy to tool and shape, which enables fast and easy processing also at elevated temperatures. Divinycell PN has got excellent chemical resistance and is compatible with all commonly

used resin systems such as polyester, epoxies, vinyl esters and more. With its high processing temperature performance and good dimensional stability at elevated processing temperatures, it can be readily used in infusion or with a wide variety of prepreg systems as an alternative to press bonding or contact moulding.

Mechanical properties Divinycell® PN

Property	Test Procedure	Unit		PN65	PN80	PN115
Compressive Strength ¹	ASTM D 1621	MPa	Nominal	0.7	1	1.7
Compressive Modulus ¹	ASTM D 1621 B-73	MPa	Nominal	65	80	115
Shear Strength	ISO 1922	MPa	Nominal	0.45	0.6	0.95
Shear Modulus	ISO 1922	MPa	Nominal	12	20	31
Shear Elongation	ISO 1922	%	Nominal	20	15	12
Density	ISO 845	kg/m ³	Nominal	65	80	115

All values measured at +23°C.

1. Properties measured perpendicular to the extrusion direction.

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

Product Characteristics

- High temperature resistance
- Recyclable
- Thermoformable
- Good chemical resistance
- Good mechanical properties
- Minimum resin uptake

Applications within

- Wind blades
- Nacelles
- Tanks and Covers
- Panelling
- Sport goods
- Goods Transport
- Furnitures

Technical Characteristics

Technical characteristics Divinycell® PN

Characteristics ¹	Unit	PN65	PN80	PN115	Test method
Density variation	kg/m ³	± 5	± 5	± 5	ISO 845
Thermal conductivity ²	W/(m-K)	0.032	0.032	0.032	ISO 12667

1. Typical values are approximate
2. Thermal conductivity at +20°C

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

Physical characteristics

Format		Unit	PN65	PN80	PN115
Plain sheets	Length	mm	2440	2440	2440
	Width	mm	1220	1220	1220
GS sheet	Length	mm	1220	1220	1220
	Width	mm	1220	1220	1220

Other dimensions are available on request.

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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