Divinycell P

Technical Data

The high performance PET sandwich core

Divinycell P is based on PET, which makes it to a recyclable, thermoplastic sandwich core material. Divinycell P is particularly ideal for public transportation, industrial and wind energy applications. The energy efficiency of a Divinycell P sandwich makes it ideal for transport applications such as interior panelling, floors and exterior panels for trans, trams, buses and coaches. In the wind energy market the excellent properties and good processing characteristics means it can be used in both blades and nacelles. In the industrial/ construction market, the good mechanical and FST properties of Divinycell P allows it to be used for a wide variety of applications such as domes, architectural claddings and industrial housings. Divinycell P is compatible with most commonly used resin and manufacturing systems. With its high residual strength and good dimensional stability at elevated processing temperatures, it can be readily used with a wide variety of “industrial” medium temperature prepreg systems. It is easily thermoformed and used in pultrusion moulding.

Mechanical properties Divinycell® P

Property	Test Procedure	Unit		P60	P100	P150
Compressive Strength[1]	ASTM D 1621	MPa	Nominal	0.7	1.5	2.3
			Minimum	0.45	1.1	2.0
Compressive Modulus[1]	ASTM D1621-B-73	MPa	Nominal	65	100	152
			Minimum	29	60	115
Tensile Strength	ASTM D 1623	MPa	Nominal	1.2	1.8	2.45
			Minimum	0.8	1.35	1.85
Shear Strength	ISO 1922	MPa	Nominal	0.45	0.85	1.25
			Minimum	0.32	0.69	0.95
Shear Modulus	ISO 1922	MPa	Nominal	13	28	40
			Minimum	9.5	22	36
Shear Elongation	ISO 1922	%	Nominal	20	12	7.5
			Minimum	8	3	3
Density	ISO 845	kg/m³	Nominal	65	110	150

All values measured at +23°C. Testing is done on foam without welding lines.

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

Divinycell P is type approved by:

Product Characteristics

- High temperature resistance
- Recyclable
- Thermoformable
- Good chemical resistance
- Very good FST properties

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Technical characteristics Divinycell® P

Characteristics[1]	Unit	P60	P100	P150	Test method
Density variation	%	± 7	± 6	± 5	-
Thermal conductivity[2]	W/(m-K)	0.033	0.033	TBD	ISO 4897
Fire Resistance class[3]	-	S4 ST2 SR2	S4 ST2 SR2	S4 ST2 SR2	DIN 5510*
	-	M1 F1	M1 F1	M1 F1	AFNOR NF F 16-101*

1. Typical values are approximate
2. Thermal conductivity at +20°C
3. Measured at different thicknesses, contact Diab for more information

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

Physical characteristics

Format		Unit	P60	P100	P150
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.

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