Vicell T

Vicell T 是闭孔 PET 泡沫，以 PET 作为基体材料，使其具有较好的力学性能， 因此可被用于夹层结构材料芯材，并被广泛应用于建筑、公路运输、轨道交通、航空、船舶、风电等领域；Vicell PET 泡沫同时具备优异的耐疲劳性并且适用于各类树脂和成型工艺，成型过程中能承受很高的固化温度。Vicell T 泡沫有多种尺寸规格可供客户选择，并能按照客户的要求定制不同性能要求的产品和进行多种形式的后续机械加工。带(S)为封孔处理后的产品，可降低树脂吸收率，同时保证未封孔处理的产品性能一致。

Vicell T, a closed cell foam,using PET as its base material,has many good mechanical properties.Therefore,it is often used as core materials with sandwich structures,and widely used in constructions,road transportation,rail transit, aviation,ships,wind power and other fields; Vicell PET foam has excellent fatigue resistance and is suitable for many kinds of resin and molding process,in which it is able to bear very high solidifying temperature. Vicell T has various sizes and specifications available for customers,can be customized according to customer’s various technical requirements, and is suitable for a variety of follow-up machining.Besides (S)are types with surface treatment. These types could reduce the surface resin uptake, meanwhile maintaining the same mechanical properties.

产品特征 Product properties

- 加工便利：通过热成形，可以实现复杂的形体结构，且在加热状态下热稳定性良好。

  Easy processing: thermal forming can forge complicated shapes and structures, heat stability is still maintained in heating condition.

- 良好的力学性能：具有较高的剪切、压缩性能和优异的耐疲劳性。

  Good mechanical property: excellent shear, compression and excellent fatigue resistance.

- 树脂兼容性强，具有优异的化学稳定性。

  Good resin compatibility, and excellent chemical stability.

- 可重复利用：在 PET 生产过程中产生的边角料、切屑和使用过后的废旧产品都可以重新回收利用。

  Recyclable: scrap material, chips during the PET production process and waste products after use can be recycled.

- 耐高温性：在加工过程中可以短时间承受 150℃左右的温度，在使用寿命内则可长时间承受 100℃左右的温度。

  High temperature resistance: it can ensure around 150℃ while during process, it can ensure the temperature around 100℃ for long periods.

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测试项目 Item	测试标准 Standard	单位 Unit	值 Value	T60/ T60(S)	T80/ T80(S)	T100/ T100(S)	T115/ T115(S)	T135 /T135(S)	T150/ T150(S)	T200/ T200(S)	T250/ T250(S)	T300/T300(S)
密度 Density	ISO 845	Kg/m^3	公称密度 Nominal density	65	85	100	115	135	150	200	250	300
			区间 Range	60-70	80-90	95-105	110-120	130-140	145-155	190-210	235-260	270-330
压缩强度 Z Compression strength Z	ISO 844	MPa	平均值 Mean	0.85	1.05	1.50	1.80	2.20	2.50	3.80	4.90	6.50
			最小值 Minimum	0.70	0.85	1.30	1.50	1.80	2.30	3.30	4.40	5.50
压缩模量 Z Compression modulus Z	ISO 844	MPa	平均值 Mean	55	80	95	115	135	145	200	260	330
			最小值 Minimum	45	65	80	95	115	120	170	200	270
拉伸强度 Z Tensile strength Z	ASTM C297	MPa	平均值 Mean	1.4	1.45	1.80	2.00	2.25	2.40	2.90	3.40	3.70
			最小值 Minimum	1.15	1.25	1.40	1.50	1.80	2.00	2.30	2.80	2.90
拉伸模量 Z Tensile modulus Z	ASTM C297	MPa	平均值 Mean	80	95	110	130	150	160	210	260	350
			最小值 Minimum	70	85	90	110	125	135	170	200	300

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剪切强度 XZ Shear strength XZ	ISO 1922	MPa	平均值 Mean	0.50	0.61	0.80	1.00	1.20	1.40	2.00	2.30	2.50
			最小值 Minimum	0.42	0.55	0.72	0.85	1.05	1.25	1.60	1.80	2.00
剪切模量 XZ Shear modulus XZ	ISO 1922	MPa	平均值 Mean	15	20	26	31	37	45	65	85	105
			最小值 Minimum	12	17	22	26	32	39	57	75	98
剪切强度 YZ Shear strength YZ	ISO 1922	MPa	平均值 Mean	0.50	0.59	0.79	0.95	1.18	1.35	1.90	2.20	2.45
			最小值 Minimum	0.40	0.50	0.71	0.80	1.03	1.20	1.55	1.75	2.00
剪切模量 YZ Shear modulus YZ	ISO 1922	MPa	平均值 Mean	15	19	25	28	35	40	59	78	90
			最小值 Minimum	12	16	21	25	31	36	55	72	85
剪切断裂延伸率 XZ、YZ Shear breaking elongation XZ、YZ	ISO 1922	%	平均值 Mean	20	22	16	13	11	9	6	5	3
			最小值 Minimum	15	16	10	8	7	5	4	3	2

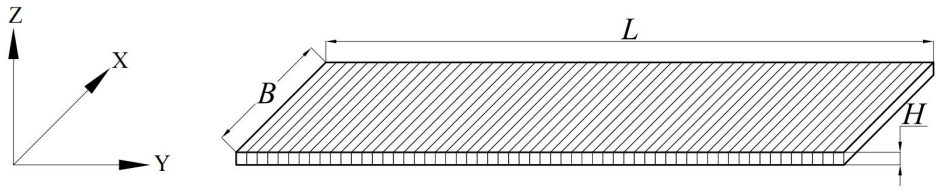
标准板材 Standard sheet	Length	mm	2445	Tolerance	±5
	Width	mm	1220/1005	Tolerance	±5

1、最小值按照 DNV 定义要求。Minimum values by DNV definition.

2、平均值为产品密度区间内公称密度达到的平均力学性能。The average value is the average mechanical property of the nominal density within the product density range.

方向定义 Direction definition

PET 泡沫板材板材发泡、热熔焊接（热熔焊接是 PET 泡沫板材自熔粘接，没有加入其他化学元素）、分切得到的长方体板材，长度 L 为 Y，宽度 B 为 X（即焊接缝方向），厚度 H 为 Z， 方向 X 与方向 Y 共同组成厚度 Z 的垂直面。Polyethylene terephthalate structure foam plate cuboid plate obtained by foaming, Hot melt welding（Hot melt welding is the self fusing bonding of PET foam plate without adding other chemical elements）, slitting. The length L of the panel is Y, the width B is X(That is, the direction of the welding seam), the thickness H is Z. The direction x and the direction y together formed the vertical plane of the thickness z.



产品储存条件 Storage condition

产品应在-25℃~40℃，湿度≤85%库房内贮存，贮存时应按类别、规格分别堆放，避免受重压，库房应保持干燥通风。

The products should be stored in a warehouse with a temperature of -25℃~40℃, and a humidity of ≤85%. They should be stacked according to categories and

specifications to avoid heavy pressure. The warehouse should be kept dry and ventilated.