

Vicell V

Vicell V 是闭孔交联聚氯乙烯结构泡沫，具有优异的比强度，适用于多种复合材料应用场合，尤其是高温成型工艺体系。Vicell V 泡沫具有优异的化学稳定性和极低的吸水率并适合与多种树脂体系配合使用，包括环氧树脂，聚酯树脂和乙烯基酯树脂。Vicell V 泡沫有多种尺寸规格供选择，并可按照客户要求进行各种形式的机械加工。他们除了共同的优异基础物理特性外，还具有不同产品特征。

Vicell V, a closed cell cross-linked PVC structural foam with excellent specific strength, especially high temperature molding process system, is applicable for a wide range of composite materials. Vicell V foam has excellent chemical stability and extremely low water absorption, and is able to work together with a variety of resin systems, including epoxy, polyester and vinyl ester resins. Vicell V foam provides various sizes and specifications, and can be processed by various forms of machining according to customer requirements. In addition to having the same excellent basic physical characteristics, the different series of product provide different characteristics.

产品特性 *Product properties*

<p>综合力学性能优良</p> <p>Excellent comprehensive mechanical properties</p>	<p>高耐高温性能</p> <p>High temperature resistance</p>
<p>树脂兼容性强，优异的化学稳定性</p> <p>Excellent compatibility with resin and good chemical stability</p>	<p>低燃、隔声、隔热、减震</p> <p>Flame resistance, sound and heat insulation and shock absorption</p>
<p>吸水率低，耐候性好</p> <p>Low water absorption and good weather resistance</p>	<p>良好的易加工性</p> <p>Good process-ability</p>
<p>适用于多种复合材料的干湿法成型工艺，如 RTM、模压等成型工艺</p> <p>Be applicable for various dry or wet molding processes concerning composite materials, such as RTM, mould pressing, etc.</p>	
<p>应用于风力发电机组风轮叶片及机舱罩、船舶、轨道交通、体育器械、建材等领域</p> <p>It is used in the wind turbine blade and engine room cover, ship, rail transit, sports equipment, building materials and other fields</p>	

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性能 Property	测试标准 Test standard	指标 Unit	值 Value	V45	V60	V80	V100	V130	V160	V200	V250
密度 Density	ISO 845	Kg/m ³	平均值 Mean	45	60	80	100	130	160	200	250
			区间 Range	40-53	54-69	72-92	90-115	120-150	151-180	180-225	230-275
压缩强度 Z Compression strength	ISO 844	MPa	平均值 Mean	0.65	0.95	1.45	2.1	3.2	3.9	5.5	7
			最小值 Minimum	0.5	0.8	1.2	1.7	2.6	3.3	4.5	6
压缩模量 Z Compression modulus	ISO 844	MPa	平均值 Mean	50	80	110	140	180	230	300	380
			最小值 Minimum	35	65	85	110	145	190	250	330
拉伸强度 X ¹ Tensile strength	ASTM D638	MPa	平均值 Mean	0.98	1.35	2	2.7	4	4.5	6	7.5
			最小值 Minimum	0.85	1.05	1.6	2.2	3	3.7	4.8	5.5
拉伸模量 X ¹ Tensile modulus	ASTM D638	MPa	平均值 Mean	38	50	70	85	120	135	175	230
			最小值 Minimum	30	38	50	65	95	115	140	160
平拉强度 Z ² Tensile strength	ASTM C297	MPa	平均值 Mean	1.5	1.8	2.5	3.5	4.8	5.3	7.3	8.8
			最小值 Minimum	1	1.5	2	2.6	3.5	3.8	6.5	7.8
平拉模量 Z ² Tensile modulus	ASTM C297	MPa	平均值 Mean	55	75	110	135	180	200	270	300
			最小值 Minimum	40	60	85	110	130	180	230	250
剪切强度 XZ Shear strength	ISO 1922	MPa	平均值 Mean	0.55	0.82	1.25	1.75	2.5	2.80	3.5	4.7
			最小值 Minimum	0.5	0.73	1.05	1.4	2.1	2.2	3.2	4.2
剪切模量 XZ Shear modulus	ISO 1922	MPa	平均值 Mean	16	22	30	42	55	64	75	100
			最小值 Minimum	14	19	25	35	45	55	68	84
断裂延伸率 XZ Shear breaking elongation	ISO 1922	%	平均值 Mean	15	23	30	35	40	42	45	45
			最小值 Minimum	8	10	15	15	20	22	25	25

常规尺寸 Size

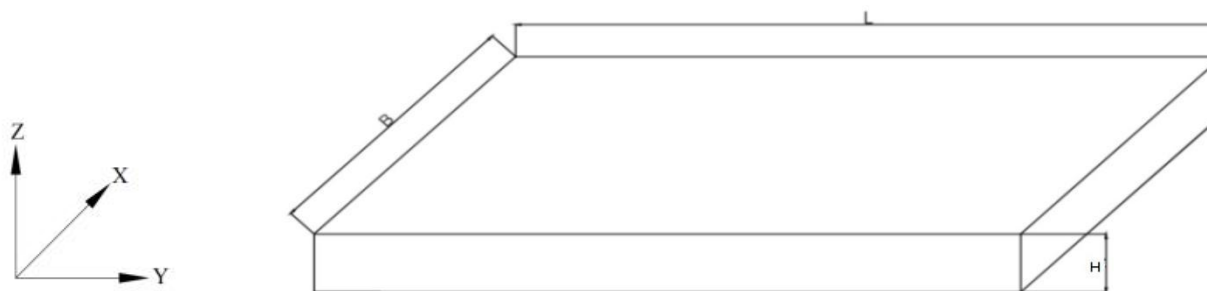
标准板材 Standard plate	测试标准 Test standard	单位 Unit	V45	V60	V80	V100	V130	V160	V200	V250
	宽度 Width	mm	1200	1130	1020	980	850	800	750	700
长度 Length	mm	2600	2440	2180	2020	1900	1800	1600	1500	
厚度 Thickness	mm	5-95	5-95	5-80	5-66	5-55	5-55	5-50	5-50	

1. 拉伸强度与模量为哑铃型拉伸，无粘接剂粘接。 The tensile strength and modulus are dumbbell tensile without adhesive
2. 为平拉强度与模量为平面拉伸，需用粘接剂把样品与夹具粘接在一起。 For flat tensile strength and modulus, the sample and fixture shall be bonded together with adhesive
3. 压缩强度与模量测试样品厚度为 50mm，拉伸强度与模量测试样品厚度为 10mm，平拉强度与模量测试样品厚度为 50mm。 The thickness of compressive strength and modulus test samples is 50mm, the thickness of tensile strength and modulus test samples is 10mm, and the thickness of flat tensile strength and modulus test samples is 50mm.
4. 最小值为保证产品密度区间内最小的力学性能。 The minimum value is to ensure the minimum mechanical properties within the product density range.

方向定义 *Direction definition*

交联聚氯乙烯结构泡沫经过发泡为规整的长方体板材，板材的长度 L 为 y ，宽度 B 为 x ，厚度 H 为 z ，方向 x 与方向 y 共同组成厚度 z 的垂直面。

The cross-linked PVC structural foam is foamed into regular rectangular panel in Fig. The length L of the panel is y , the width B is x , 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 $-25^{\circ}\text{C}\sim 45^{\circ}\text{C}$ ，湿度 $\leq 85\%$ 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 $-25^{\circ}\text{C}\sim 45^{\circ}\text{C}$, and a humidity of $\leq 85\%$. They should be stacked according to categories and specifications to avoid heavy pressure. The warehouse should be kept dry and ventilated.



标准板材 Standard plate	测试标准 Test standard	单位 Unit	V45	V60	V80	V100	V130	V160	V200	V250
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	长度 Length	mm	2600	2440	2180	2020	1900	1800	1600	1500
	厚度 Thickness	mm	5-95	5-95	5-80	5-66	5-55	5-55	5-50	5-50