产品参数表

TCORE® Atlas HPE

Atlas HPE 系列结构泡沫

产品特性/Product Properties

• 卓越的抗疲劳性能	• Excellent fatigue resistance
• 适用于动态负载结构	• Suitable for dynamically loaded structures
• 抗苯乙烯性能更高	• Higher styrene resistance
• 耐温性更高	• Higher temperature resistance
• 树脂注塑更理想	• Ideal for resin infusion
• 树脂用量比其他泡沫更少	• Lower resin intake than other foams
• 可循环利用	• Recyclable

应用领域/Applications

• **风能：** 风机叶片、机舱罩等	• **Wind energy：** Rotor blades, nacelles, …
• **船舶：** 船体、甲板、舱壁等	• **Marine：** Hulls, decks, bulkheads, …
• **公路和轨道交通：** 顶板、内部结构、地板、隔墙、侧缘、车头等	• **Road and Rail:** Roof panels, interiors, floors, partition walls, side skirts, frontends, …
• **航空：** 内部结构、整流罩、厨房推车、民用飞机等	• **Aircraft and Aerospace：** Interiors, radomes, galley carts, general aviation,…
• **休闲：** 雪橇、滑雪板、冲浪板等	• **Recreational sports:** Skis, snowboards, surfboards, …
• **工业：** 工装、罐、管道、盖板等	• **Industries:** Tooling, tanks, ductwork, covers, …

应用工艺/ Applicable Processes

• 接触成型（手糊/喷射）	• Contact Forming（Hand/Spray）
• RTM 及真空导流	• RTM and Vacuum Infusion
• 粘结	• Adhesive Bonding
• 预浸处理	• Pre-preg Processes
• 热成型	• Thermoforming

Atlas PE泡沫是一种具有互穿网络结构的新型发泡材料，由于这种独特的化学结构，使其成为高强度、耐疲劳、耐高温、抗冲击等应用领域的理想选择。广泛应用于大型风力发电叶片及主承构件、船舶、运动器材等领域。

HPE foam is a new type of foam material with interpenetrating network structure. Due to this unique chemical structure, it is ideal for applications such as high strength, fatigue resistance, high temperature resistance and impact resistance. Widely used in large wind power blades and main bearing components, ships, sports equipment and other felds..

典型性能/Typical Performance		单位/unit	F60	F80	HPE 90	HPE 110	HPE 160	HPE 220
密度范围 Density Range	ASTM - D1622	Kg/m^3	55-70	75-85	90-105	105-120	150-165	215-230
压缩强度 Compressive Strength	ASTM - D1621	MPa	0.55	0.8	0.85	1.1	2.1	3.8
压缩模量 Compressive Modulus	ASTM - D1621	MPa	30	45	55	65	90	170
拉伸强度 Tensile Strength	ASTM - D1623	MPa	0.55	0.8	1.0	1.1	1.6	2.8
拉伸模量 Tensile Modulus	ASTM - D1623	MPa	35	45	50	55	85	185
剪切强度 Shear Strength	ASTM - C273	MPa	0.48	0.6	0.8	0.9	1.2	1.6
剪切模量 Shear Modulus	ASTM - C273	MPa	7.5	12	16	20	30	55
剪切伸长率 Shear Elongation	ASTM - C273	%	25	20	20	15	10	6
吸水率 Water Absorption	ISO 2896	%	＜2	＜2	＜2	＜2	＜2	＜2
热变形温度 Heat Distortion Temperature	DIN - 53424	℃	110	110	110	110	110	110

*加工方式，其他尺寸基于客户要求
*Finishing Options, other dimensions and closer tolerances upon request.
*以上数据为 23±1°C 和 50±5%湿度条件下测试平均值，括号内为最小值
*Above are the average values measured at 23+1℃ and 50+5% as RH, in brackets minimum values are reported.
*使用温度取决于时间、压力和工艺条件等。因此，建议用户联系 NMG 技术服务部门，确认 HPE 与其特定的处理参数兼容。
* Service Temperature is dependent on time, pressure and process conditions. Therefore users are advised to contact NMG Technical Services to confirm that HPE is compatible with their particular processing parameters.

备注/Notes：

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