碳元素(厦门)新材料有限公司
Carbon (Xiamen) New Materials Co., Ltd

基本信息 / Basic information

产品名称	name:	PA66-CF-BCA4
树脂类型	resin type:	聚酰胺-66 Nylon66
纤维类型	fiber type:	碳 纤 维 Carbon Fiber
纤维含量	fibe content:	40% 碳 纤 40% Carbon Fiber
颜 色	color:	黑 色 Black
材料特性	ateriaaterialproperties:	导电、耐磨、耐热、抗疲劳、高抗冲击、高强度，适用于半导体晶圆传输机械臂部件、氢能燃料电池双极板、超跑底盘结构件等。 Electrical conductivity, wear resistance, heat resistance, fatigue resistance, high impact resistance, and high strength; it is suitable for components for semiconductor wafer transfer robotic arms, bipolar plates for hydrogen fuel cells, structural components for supercar chassis.

材料参数 / Material Parameters

物理性能 Physical Properties	典型性能 Typical Characteristic	测试标准 Testing Standard
密 度 Density	1.31 g/cm^3	ISO 1183
吸水率 Water Absorption	0.15-0.25 %	ISO 2008
成型收缩率 Molding Shrinkage	0.1-0.2 %	ISO 2001
机械性能 Mechanical Properties	**典型性能 Typical Characteristic**	**测试标准 Testing Standard**
拉伸模量 Tensile Modulus	33102 MPa	ISO 527
拉伸强度 Tensile Strength	293 MPa	ISO 527
拉伸伸长率 Tensile Elongation	2.4 %	ISO 527
弯曲强度 Flexural Strength	394 MPa	ISO 178
弯曲模量 Flexural Modulus	27634 MPa	ISO 178

冲击性能 Impact Performance	典型性能 Typical Characteristic	测试标准 Testing Standard
悬臂梁缺口冲击强度 Izod Notched Impact Strength	25.7 KJ/m²	ISO 179
悬臂梁无缺口冲击强度 Notched impact strength of cantilever beam	193 KJ/m²	ISO 179
电性能 **Eiectricai**	**典型性能** **Typical Characteristic**	**测试标准** **Testing Standard**
表面电阻系数Surface Resistivity	< E3 Ω	ISO 3915-2022
热性能 **Thermal performance**	**典型性能** **Typical Characteristic**	**测试标准** **Testing Standard**
热变形温度 Heat Deflection Temperature	278 ℃	ISO 1634
熔融温度 Melting Point	258-298 ℃	ISO 3146
加工处理 **Processing and Handling**	**典型性能** **Typical Characteristic**	**测试标准** **Testing Standard**
注射压力 Injection Pressure	95-150 MPa	
熔体温度 Melt Temperature	258-298 ℃	
模具温度 Mold Temperature	85-105 ℃	
干燥温度 Drying Temperature	115-135 ℃	
干燥时间 Drying Time	4-6 H	

材料简介/Material Introduction

碳纤维是一种高性能增强的复合材料，具有耐高温、抗摩擦、导电、导热及耐腐蚀等特性，

碳纤维的性能取决于其原料及制造过程，生产的产品适用于注塑，压缩和挤出成型的应用。

碳纤维增强复合材料可用航空航天、汽车、体育、建筑、机械、电子电器等领域的应用还将不断扩大。

Carbon fiber is a high-performance reinforced composite material with characteristics of high temperature resistance, anti-friction, electricity conductivity, heat conductivity and corrosion processes, resistance. The performance of carbon fiber depends on its raw materials and manufacturing and the products are suitable for applications of injection molding, compression molding, and extrusion molding. The application of carbon fiber reinforced composite materials in aerospace, automobile, sports, machinery, electronics and electrical equipment and other fields will continue to expand.

注意事项 / PrecautionsandConsiderations

使用本材料时，应注意避免过度加热或过度剪切，以免损坏材料的性能，选择适合碳维的注塑机，压力、注射速度、模具温度等参数应根据碳纤维材料的特性进行调整，碳纤维材料特性，注塑机在使用过程中可能会受到较大的磨损，腐蚀。因此，应定期对机台进行维护保养、确保机台的正常运行和使用寿命。

When using this material, it is important to avoid excessive heating or shearing to prevent damage to thematerial's properties. It is necessary to select an injection molding machine suitable for carbon fiber, and the parameters such as pressure, injection speed, and mold temperature should be adjusted to the characteristics of the carbon fiber material. The carbon fiber material has unique properties, and according the injection molding machine may suffer from significant wear and corrosion during use. Therefore, regular maintenance of the machine should be conducted to ensure its normal operation and service life.