

Name: HIGH-STRAN® PPS-NA-LCF40  
 Resin Type: ● PPS  
 Fiber Type: ● Long Carbon Fiber  
 Fiber Content: ● 40%  
 Color: ● Black  
 : ● Injection Molding, Good mechanical properties  
 Material Properties:

### **Materials Characteristic/**

<b>Physical</b>	<b>Typical Characteristic</b>	<b>Testing Standard</b>
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Specific Gravity	1.39g/cm <sup>3</sup>	ASTM D-792
Molding Shrinkage	0.10 - 0.30 %	ASTM D-955 (1/8 in (3.2 mm)section)

<b>Mechanical</b>	<b>Typical Characteristic</b>	<b>Testing Standard</b>
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Tensile Strength	204 MPa 201 MPa	ISO: 527 ASTM D-638
Tensile Modulus	25369 MPa 25521 MPa	ISO: 527 ASTM D-638
Tensile Elongation	0.5-1.6% 0.5-1.6%	ISO: 527 ASTM D-638
Flexural Strength	308 MPa 295 MPa	GB/T 9341 ASTM D-790
Flexural Modulus	15698 MPa 14876 MPa	GB/T 9341 ASTM D-790
Notched Izod Impact	24 KJ/m <sup>2</sup> 199 J/m	ISO: 180 ASTM D-256
Notched Charpy Impact (23 °C )	21 KJ/m <sup>2</sup>	ISO: 179

## Materials Process guideline

### Thermal

	Typical Characteristic	Testing Standard
Deflection Temperature (1.8MPa)	273 °C	ISO 75-2/A

### Flammability

	Typical Characteristic	Testing Standard
Flame Retardant	HB @ 1.5 mm	ASTM D-635

### Injection

	Typical Characteristic
Injection Pressure	90~125 MPa
Melt Temperature	300~350 °C
Mold Temperature	100~120 °C
Pre-drying	3-4 hrs @120~140 °C
Dry water content	< 0.1 %

## Processing Notes

Values included in this Property Data Sheet are based on limited laboratory test specimens. These values are typical values and are not meant to be used for setting maximum or minimum values for specification purposes. Any determination of the suitability of the materials shown in this property data sheet for use by the end user is the sole responsibility of the user, who must assure himself that the material as subsequently processed meets the need of his particular product or use.

Note: [1]The melt temperature is the measured temperature of the melt in the barrel, the customer needs to evaluate the deviation between the set temperature and the measured temperature of the barrel of the machine to avoid carbonization cracking of the material caused by overheating;[2]the mold temperature here refers to the measured mold temperature rather than the set mold temperature,as the mold temperature is related to the appearance and dimensional stability of the product, please evaluate it according to the product requirements ; [3]it is recommended to use a dehumidification dryer for drying, customers are requested to evaluate the actual drying temperature and time according to their own drying equipment conditions within the suggested reference range, in order to achieve moisture content in line with the requirements of production;[4] before injection molding, it is recommended to bake the product with moisture content below 0.1%,the material will degrade when placed in injection molding.

## Introduction

The product name for long fiber reinforced thermoplastic materials for injection moldings,compression molding and extrusion.Retention of fiber length in the finished part is key to the performance .Fiber length is retained by proper use of free flowing check valves,metering screws and a complete evaluation of the mold to reduce high shear and allow the materials to fill the part while maintaining the critical fiber length.The fiberglass is continuous within the pellet and offers incredible properties and performance when molded correctly.

## Injection molding general processing

Use full round runners with minimum diameters of about 5-6MM;Use maximum allowable gate size no limited;Shorten sprues to mini and taper them to gate in graduated taper;Use large sprue, straight gate, can not use dispensing;Sprue/Runner;Gate minimum about 5mm ; Recycling can be added during the molding process.It is recommended that no more than about 3-5% recycle be added to reduce the possibility of property and performance degradation in the molded part.The injection Molding machine should be purged with polyethylene or polypropylene prior to shut down.It is recommended to leave long glass products in the barrel or in the tools.Use metering screw for plasticizing and delivery to material to mold.40% feeding;18:1 to 24:1 l/d ratio;Mold with more than 100Tons machine for better performance; Use 100% a free flow check valve and a large open nozzle to reduce shear

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**Availability** : Global