

Name:	HIGH-STRAN® PA12-NA-LCF40
Resin Type:	● Nylon 12 (Polyamide 12)
Fiber Type:	● Long Carbon Fiber
Fiber Content:	● 40%
Color:	● Black
Material Properties:	● Injection Molding, Good mechanical properties

Materials Characteristic/

Physical	Typical Characteristic	Testing Standard
Specific Gravity	1.17 g/cm ³	ASTM D-792

Molding Shrinkage	-	ASTM D-955 (1/8 in (3.2 mm)section)
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Mechanical	Typical Characteristic	Testing Standard
Tensile Strength	184 MPa	ASTM D-638

Tensile Modulus	21979 MPa	ASTM D-638
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Tensile Elongation	1.0 - 2.0 %	ASTM D-638
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Flexural Strength	272 MPa	ASTM D-790
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Flexural Modulus	17849 MPa	ASTM D-790
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Notched Izod Impact	272 J/m	ASTM D-256
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Un-Notched Izod Impact	925 J/m	ASTM D-4812
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Materials Process guideline

Thermal

Typical Characteristic

Testing Standard

Deflection Temperature (1820
kPa)

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ASTM D-648

Flammability

Typical Characteristic

Testing Standard

Flame Retardant

HB @ 1.5 mm

ASTM D-635

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 ; Recyling 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

Email : umit.gundogdu@hightechpoly.com

Tel : +90 531 250 1732

Availability : Global