

**LFT-G® TPU-NA-LCF40**

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| Product Name:      | LFT-G® TPU-NA-LCF40           |
| Resin Description: | ● Thermoplastic Polyurethanes |
| Fiber Type:        | ● Long Carbon Fiber           |
| Fiber Content:     | ● 40%                         |
| Color:             | ● Black                       |
| Processed Method:  | ● Injection Molding           |

**Materials Characteristic/材料参数**

| Physical | Typical Characteristic | Testing Standard |
|----------|------------------------|------------------|
|----------|------------------------|------------------|

|                        |                        |            |
|------------------------|------------------------|------------|
| 比重<br>Specific Gravity | 1.31 g/cm <sup>3</sup> | ASTM D-792 |
|------------------------|------------------------|------------|

| Mechanical | Typical Characteristic | Testing Standard |
|------------|------------------------|------------------|
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| 拉伸强度<br>Tensile Strength | 276 MPa | ASTM D-638 |
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|                         |           |            |
|-------------------------|-----------|------------|
| 拉伸模量<br>Tensile Modulus | 29655 MPa | ASTM D-638 |
|-------------------------|-----------|------------|

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|-----------------------------|------|------------|
| 拉伸伸长率<br>Tensile Elongation | 1-2% | ASTM D-638 |
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|                           |         |            |
|---------------------------|---------|------------|
| 弯曲强度<br>Flexural Strength | 414 MPa | ASTM D-790 |
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| 弯曲模量<br>Flexural Modulus | 21448 MPa | ASTM D-790 |
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| 悬臂梁缺口冲击强度<br>Notched Izod Impact | 294 J/m | ASTM D-256 |
|----------------------------------|---------|------------|

|                              |         |             |
|------------------------------|---------|-------------|
| 无缺口冲击强度<br>Un-notched Impact | 1081J/m | ASTM D-4812 |
|------------------------------|---------|-------------|

## Materials Process guideline/加工参数参考

| Thermal | Typical Characteristic | Testing Standard |
|---------|------------------------|------------------|
|---------|------------------------|------------------|

|                                                         |         |            |
|---------------------------------------------------------|---------|------------|
| 热变形温度<br>Deflection Temperature<br>@ 264 psi (1820 kPa) | 246 ° C | ASTM D-648 |
|---------------------------------------------------------|---------|------------|

| Flammability | Typical Characteristic | Testing Standard |
|--------------|------------------------|------------------|
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|                        |             |            |
|------------------------|-------------|------------|
| 阻燃性<br>Flame Retardant | HB @ 1.5 mm | ASTM D-635 |
|------------------------|-------------|------------|

| Injection | Typical Characteristic |
|-----------|------------------------|
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|----------------------------|------------|
| 注塑压力<br>Injection Pressure | 70-110 MPa |
|----------------------------|------------|

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|--------------------------|--------------|
| 熔体温度<br>Melt Temperature | 230°C~275 °C |
|--------------------------|--------------|

|                           |          |
|---------------------------|----------|
| 模具温度<br>Mould temperature | 40~70 °C |
|---------------------------|----------|

|                                                                         |                       |
|-------------------------------------------------------------------------|-----------------------|
| 干燥（最佳使用除湿干燥机）<br>Pre-drying<br>(Use the best of dehumidification dryer) | 3~5 hrs @ 85°C~105 °C |
|-------------------------------------------------------------------------|-----------------------|

|                          |        |
|--------------------------|--------|
| 水分含量<br>Moisture Content | 0.02 % |
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## Processing Notes/工艺注意事项

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. To the best of our knowledge the information in this publication is accurate and reliable, LFT-G® does not assume any liability whatsoever for the accuracy of this information.

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## Introduction/材料简介

### **LFT-G<sup>®</sup>**

is 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.

LFT-G 是长纤维增强热塑性材料，生产的产品适用于注塑，压缩和挤出成型的应用。成品中的纤维长度被部分保留是关键。适当的时候使用止回阀门，完整的评估螺杆和模具，为了减少高剪切，保持纤维长度可以适应填充的材料零件。粒料中的玻璃纤维是连续的，脱模时可以提供优异的材料性能。

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## Injection molding general processing /模具

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 to LFT-G 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.

使用最小直径在 5-6MM 的圆形流道改变物流流动；允许浇口尺寸没有最大上限；缩短浇道，逐渐缩小；使用大水口，直胶口，不能点胶；浇口/流道；浇口最小约 5mm 成型过程中如果将再生料添加到 LFT-G 中，添加范围不能超过 5%，因为会降低或减少成型部件的性能。关闭注塑机之前，先用聚乙烯或聚丙烯冲洗。长玻璃制品不要留在进料筒中。使用螺杆将材料塑化并输送到模腔中。40%下料，18:1/24:1 比率；模具吨位最少 100 吨，使用大口径喷嘴以便降低剪切力。

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**Availability** : Global

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