

# Tepla® T5040GF

## Material Description:

Tepla® T5040GF is a Polyphenylsulfone (PPSU) product filled with 40% glass fiber. Primary characteristic: flame rated.

| General              |                                     |                       |  |
|----------------------|-------------------------------------|-----------------------|--|
| Material Status      | • Commercial: Active                |                       |  |
| Availability         | • Asia Pacific                      | • North America       |  |
|                      | • Europe                            | • Latin America       |  |
|                      | • Middle East                       | • Africa              |  |
| Filler/Reinforcement | • Glass Fiber, 40% Filler by Weight |                       |  |
| Features             | • Low Extractables                  | • High Strength       |  |
|                      | • Good Dimensional Stability        | • Flame Retardant     |  |
|                      | • Heat Resistant                    | • Corrosion Resistant |  |
| Appearance           | • Colors Available                  |                       |  |
| Processing Method    | • Injection Molding                 |                       |  |

| Physical Properties                | Typical Value | Unit              | Test Method |
|------------------------------------|---------------|-------------------|-------------|
| Density/Specific Gravity           | 1.63          | g/cm <sup>3</sup> | ASTM D792   |
| Molding Shrinkage - Flow (3.18 mm) | 0.2           | %                 | ASTM D955   |
| Water Absorption (24 hr)           | 0.13          | %                 | ASTM D570   |

| Hardness                    | Typical Value | Unit | Test Method |
|-----------------------------|---------------|------|-------------|
| Rockwell Hardness (R-Scale) | 124           |      | ASTM D785   |

| Mechanical Properties      | Typical Value | Unit | Test Method |
|----------------------------|---------------|------|-------------|
| Tensile Strength           | 175           | MPa  | ASTM D638   |
| Tensile Elongation (Yield) | 2.5           | %    | ASTM D638   |
| Flexural Modulus           | 13000         | MPa  | ASTM D790   |
| Flexural Strength          | 230           | MPa  | ASTM D790   |

| Impact Properties                     | Typical Value | Unit | Test Method |
|---------------------------------------|---------------|------|-------------|
| Notched Izod Impact (23°C, 3.18 mm)   | 144           | J/m  | ASTM D256   |
| Unnotched Izod Impact (23°C, 3.18 mm) | 900           | J/m  | ASTM D4812  |

| Flammability          | Typical Value | Unit | Test Method |
|-----------------------|---------------|------|-------------|
| Flame Rating (1.6 mm) | V-0           |      | UL 94       |

| Electrical Properties                        | Typical Value | Unit  | Test Method |
|----------------------------------------------|---------------|-------|-------------|
| Dielectric Strength<br>Method A (Short-Time) | 25            | kV/mm | ASTM D149   |

| Thermal Properties                | Typical Value | Unit     | Test Method |
|-----------------------------------|---------------|----------|-------------|
| Deflection Temperature Under Load |               |          | ASTM D648   |
| 0.45 MPa, Unannealed              | 232           | °C       |             |
| 1.8 MPa, Unannealed               | 220           | °C       |             |
| CLTE - Flow                       | 1.40E-05      | cm/cm/°C | ASTM D696   |

| Processing Information | Typical Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 149           | °C   |
| Drying Time            | 6             | hr   |
| Rear Temperature       | 343 to 377    | °C   |
| Middle Temperature     | 343 to 377    | °C   |
| Front Temperature      | 343 to 377    | °C   |

|                        |                |     |
|------------------------|----------------|-----|
| Processing (Melt) Temp | 343 to 390     | °C  |
| Mold Temperature       | 130 to 160     | °C  |
| Back Pressure          | 0.345 to 0.689 | MPa |
| Screw Speed            | 50 to 100      | rpm |

## NFD ADVANCED COMPOSITES

Tepla® T5040GF

### CAUTION/警告!

Before using, read the Molding Guide, Material Safety Data Sheets, and Bulletins available from NFD Advanced Composites Sales offices and Distributors supplied to your company. Caution! During drying, purging and molding, small amounts of hazardous gases and/or particulate matter may be released. These may irritate eyes, nose and throat. Use adequate local exhaust ventilation during thermal processing. To prevent resin decomposition, do not contaminate the resin or exceed the recommended melt temperature or hold-up time. Avoid inhalation or skin and eyes contact. Sweep up and dispose of spilled resin to eliminate slipping hazard. 在使用之前, 请阅读NFD公司销售办事处和经销商提供给贵公司的材料成型指南、材料安全数据表和公告。警告! 在干燥、吹扫和成型过程中, 少量有害气体或颗粒物可能会在被释放, 这些可能会刺激眼睛, 鼻子和喉咙。热处理过程中请注意做好排气通风工作。为防止树脂分解, 请勿污染树脂或超过我们为您推荐熔融温度或时间。请避免吸入或与皮肤、眼睛等接触。清扫和处理溢出的树脂, 以消除滑到的危险。

### LEGAL NOTICES/法律声明

The figures indicated here are approximate values. They may be affected by different factors, and the user is not released therefore from the obligation of performing checks and trials of his own. The values indicated here have been compiled on the basis of current tests and findings. Any legally binding guarantee of certain properties, or any suitability for a specific application can not be inferred from the present data. For detailed production regulatory information, contact customer service.

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### COMPANY/公司:

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感谢您访问新孚达 (NFD)! 我们秉承“New Formula Designer”的发展理念, 将科研创新与生产应用紧密相连, 无论您是设计师、工程师或者是采购专家, 我们都可以帮助您拓展业务并获得新的灵感。我们坚持诚信、合作、效率、创新的核心价值观, 始终把客户放在第一位。相比于我们的竞争对手, 我们专注于为您提供更先进的技术配方、更优质的产品, 更好的解决方案及更周到的售后服务, 我们懂市场、我们懂产品、我们更懂你们。

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