

**Matreial Data Sheet** 

技术数据表

NFD Composite Material (Jiangsu) Co., Ltd

# Hepla® H7000 UV

## Material Description:

Hepla ® H7000 UV is a Polyamide 12 (PA12) product filled with Nucleating Agent and UV Stabilizer. Characteristics include: UV Resistant, Nucleated. It is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America for extrusion or injection molding.

| General           |                                                   |                                                |
|-------------------|---------------------------------------------------|------------------------------------------------|
| Material Status   | <ul> <li>Commercial: Active</li> </ul>            |                                                |
| Availability      | Asia Pacific                                      | North America                                  |
|                   | • Europe                                          | <ul> <li>Latin America</li> </ul>              |
|                   | Middle East                                       | <ul> <li>Africa</li> </ul>                     |
| Additive          | <ul> <li>Nucleating Agent</li> </ul>              | <ul> <li>UV Stabilizer</li> </ul>              |
|                   | Good Flow                                         | <ul> <li>Low Viscosity</li> </ul>              |
|                   | UV Resistant                                      | <ul> <li>Good Mold Release</li> </ul>          |
| Features          | Shock Resistant                                   | <ul> <li>Chemical Resistant</li> </ul>         |
|                   | <ul> <li>Low Water Absorption</li> </ul>          | <ul> <li>Good Dimensional Stability</li> </ul> |
|                   | Nucleated                                         | <ul> <li>Wear Resistant</li> </ul>             |
|                   | <ul> <li>Connectors</li> </ul>                    | <ul> <li>Hydraulic Applications</li> </ul>     |
|                   | Electrical/Electronic Applications                | <ul> <li>Sporting Goods</li> </ul>             |
| Uses              | <ul> <li>Consumer Applications</li> </ul>         | • Tubing                                       |
| Uses              | Pneumatic Applications                            | <ul> <li>Industrial Applications</li> </ul>    |
|                   | <ul> <li>Wire &amp; Cable Applications</li> </ul> | <ul> <li>Engineering Parts</li> </ul>          |
|                   | Power/Other Tools                                 |                                                |
| Multi-Point Data  | • Isothermal Stress vs. Strain (ISO 1140          | 3-1)                                           |
| Forms             | • Granules                                        |                                                |
| RoHS Compliance   | RoHS Compliant                                    |                                                |
| Processing Method | Injection Molding                                 | Extrusion                                      |

| Physical Properties        | Typical Value | Unit              | Test Method |
|----------------------------|---------------|-------------------|-------------|
| Density                    | 1.01          | g/cm <sup>3</sup> | ISO 1183    |
| Water Absorption           | 0.7           | %                 | ISO 62      |
| (Equilibrium, 23℃, 50% RH) | 0.7           | 70                | 130 02      |
| Water Absorption           | 1.5           | 06                | ISO 62      |
| (Saturation, 23℃, 50% RH)  | 1.5           | 70                | 130 02      |
| Mold Shrinkage             |               |                   | ISO 294-4   |
| Flow                       | 0.8           | %                 |             |
| Across Flow                | 0.8           | %                 |             |

| Hardness                         | Typical Value Unit | Test Method |
|----------------------------------|--------------------|-------------|
| Shore Hardness (Shore D, 15 sec) | 70                 | ISO 868     |
|                                  |                    |             |

| Mechanical Properties           | Typical Value | Unit | Test Method |
|---------------------------------|---------------|------|-------------|
| Tensile Modulus                 | 1586          | MPa  | ISO 527-2/1 |
| Tensile Stress, yield           | 46            | MPa  | ISO 527-2/1 |
| Tensile Stress, break           | 51            | MPa  | ISO 527-2/1 |
| Tensile Strain, yield           | 4.9           | %    | ISO 527-2/1 |
| Nominal Tensile Strain at Break | >50           | %    | ISO 527-2/1 |

| Impact Properties                | Typical Value | Unit              | Test Method |
|----------------------------------|---------------|-------------------|-------------|
| Charpy Notched Impact Strength   |               |                   | ISO 179/1eA |
| -30℃                             | 5.9           | kJ/m <sup>2</sup> |             |
| 23℃                              | 6.9           | kJ/m <sup>2</sup> |             |
| Charpy Unnotched Impact Strength | ·             | ·                 | ISO 179/1eU |

| Flame Characteristics                | Typical Value | Unit | Test Method          |
|--------------------------------------|---------------|------|----------------------|
| Flammability Classification (0.8 mm) | НВ            |      | IEC 60695-11-10, -20 |

| Electrical Properties      | Typical Value | Unit    | Test Method |
|----------------------------|---------------|---------|-------------|
| Electric Strength          | 31.7          | kV/mm   | IEC 60243-1 |
| Volume Resistivity         | 1.00E+13      | Ohms•cm | IEC 60093   |
| Surface Resistivity        | 1.00E+12      | Ohms    | IEC 60093   |
| Comparative Tracking Index | 600           | V       | IEC 60112   |

| Thermal Properties                                | Typical Value | Unit         | Test Method |
|---------------------------------------------------|---------------|--------------|-------------|
| Heat Deflection Temperature Under Load            |               |              |             |
| /Bf, 0.45 MPa Flatw 80*10*4<br>sp=64mm Unannealed | 125           | $^{\circ}$ C | ISO 75/Bf   |
| /Af, 1.8 MPa Flatw 80*10*4<br>sp=64mm Unannealed  | 50            | $^{\circ}$ C | ISO 75/Af   |
| Continuous Use Temperature<br>Long Term           | 90 to 110     | $^{\circ}$   | ISO 2578    |
| Continuous Use Temperature<br>Short Term          | 150           | $^{\circ}$   | NFD Method  |
| Melting Temperature, 10℃/min                      | 178           | $^{\circ}$   | ISO 11357-3 |
| CLTE                                              |               |              | ISO 11359-2 |
| Flow                                              | 1.20E-04      | 1/℃          |             |
| Xflow                                             | 1.40E-04      | 1/℃          |             |

#### NFD ADVANCED COMPOSITES

Hepla® H7000 UV

#### 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质可能会在被释放,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的熔融温度或时间。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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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。

#### **CONTACT:**

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