

# LNPT<sup>TM</sup> THERMOCOMP<sup>TM</sup> COMPOUND PF004S

PF-1004 HS

## DESCRIPTION

LNP THERMOCOMP PF004S compound is based on Nylon 6 resin containing 20% glass fiber. Added features of this grade include: Heat Stabilized.

### GENERAL INFORMATION

|                       |                                          |
|-----------------------|------------------------------------------|
| Features              | Heat Stabilized, High stiffness/Strength |
| Fillers               | Glass Fiber                              |
| Polymer Types         | Polyamide 6 (Nylon 6)                    |
| Processing Techniques | Injection Molding                        |

### INDUSTRY

Building and Construction  
Consumer  
Electrical and Electronics  
Industrial

### SUB INDUSTRY

Building Component  
Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance  
Mobile Phone - Computer - Tablets  
Electrical

## TYPICAL PROPERTY VALUES

Revision 20231109

| PROPERTIES                                          | TYPICAL VALUES | UNITS             | TEST METHODS |
|-----------------------------------------------------|----------------|-------------------|--------------|
| <b>MECHANICAL <sup>(1)</sup></b>                    |                |                   |              |
| Tensile Stress, break                               | 128            | MPa               | ASTM D638    |
| Tensile Strain, break                               | 2.9            | %                 | ASTM D638    |
| Tensile Modulus, 50 mm/min                          | 7370           | MPa               | ASTM D638    |
| Flexural Stress                                     | 193            | MPa               | ASTM D790    |
| Flexural Modulus                                    | 5870           | MPa               | ASTM D790    |
| <b>IMPACT <sup>(1)</sup></b>                        |                |                   |              |
| Izod Impact, unnotched, 23°C                        | 596            | J/m               | ASTM D4812   |
| Izod Impact, notched, 23°C                          | 58             | J/m               | ASTM D256    |
| <b>THERMAL <sup>(1)</sup></b>                       |                |                   |              |
| HDT, 1.82 MPa, 3.2mm, unannealed                    | 203            | °C                | ASTM D648    |
| Relative Temp Index, Elec <sup>(2)</sup>            | 130            | °C                | UL 746B      |
| Relative Temp Index, Mech w/impact <sup>(2)</sup>   | 105            | °C                | UL 746B      |
| Relative Temp Index, Mech w/o impact <sup>(2)</sup> | 115            | °C                | UL 746B      |
| <b>PHYSICAL <sup>(1)</sup></b>                      |                |                   |              |
| Density                                             | 1.31           | g/cm <sup>3</sup> | ASTM D792    |
| Mold Shrinkage, flow, 24 hrs <sup>(3)</sup>         | 0.4            | %                 | ASTM D955    |
| <b>ELECTRICAL <sup>(1)</sup></b>                    |                |                   |              |
| Comparative Tracking Index (UL) {PLC}               | 1              | PLC Code          | UL 746A      |
| Hot-Wire Ignition (HWI), PLC 3                      | ≥6             | mm                | UL 746A      |
| Hot-Wire Ignition (HWI), PLC 4                      | ≥1.5           | mm                | UL 746A      |

| PROPERTIES                                  | TYPICAL VALUES                    | UNITS    | TEST METHODS |
|---------------------------------------------|-----------------------------------|----------|--------------|
| High Amp Arc Ignition (HAI), PLC 0          | ≥1.5                              | mm       | UL 746A      |
| High Voltage Arc Track Rate {PLC}           | 0                                 | PLC Code | UL 746A      |
| Arc Resistance, Tungsten {PLC}              | 6                                 | PLC Code | ASTM D495    |
| <b>FLAME CHARACTERISTICS <sup>(2)</sup></b> |                                   |          |              |
| UL Yellow Card Link                         | <a href="#">E121562-101377958</a> | -        | -            |
| UL Yellow Card Link 2                       | <a href="#">E207780-103093411</a> | -        | -            |
| UL Recognized, 94HB Flame Class Rating      | ≥1.5                              | mm       | UL 94        |
| <b>INJECTION MOLDING <sup>(4)</sup></b>     |                                   |          |              |
| Drying Temperature                          | 80                                | °C       |              |
| Drying Time                                 | 4                                 | Hrs      |              |
| Maximum Moisture Content                    | 0.15 – 0.25                       | %        |              |
| Melt Temperature                            | 265 – 275                         | °C       |              |
| Front - Zone 3 Temperature                  | 275 – 290                         | °C       |              |
| Middle - Zone 2 Temperature                 | 265 – 275                         | °C       |              |
| Rear - Zone 1 Temperature                   | 250 – 260                         | °C       |              |
| Mold Temperature                            | 80 – 95                           | °C       |              |
| Back Pressure                               | 0.3 – 0.7                         | MPa      |              |
| Screw Speed                                 | 30 – 60                           | rpm      |              |

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(3) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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