

# LNPT<sup>™</sup> THERMOCOMP<sup>™</sup> COMPOUND ECF62

ECF-1008

## DESCRIPTION

LNP THERMOCOMP ECF62 compound is based on Polyetherimide (PEI) resin containing 30% glass fiber, 10% carbon fiber. Added features of this grade include: Electrically Conductive.

| GENERAL INFORMATION   |                                                                                                                                 |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Features              | Electrically Conductive, Carbon fiber filled, High stiffness/Strength, High temperature resistance, No PFAS intentionally added |
| Fillers               | Carbon Fiber, Glass Fiber                                                                                                       |
| Polymer Types         | Polyetherimide (PEI)                                                                                                            |
| Processing Techniques | Injection Molding                                                                                                               |

  

| INDUSTRY                   | SUB INDUSTRY                      |
|----------------------------|-----------------------------------|
| Building and Construction  | Building Component                |
| Consumer                   | Personal Accessory                |
| Electrical and Electronics | Mobile Phone - Computer - Tablets |
| Industrial                 | Electrical                        |

## TYPICAL PROPERTY VALUES

Revision 20231109

| PROPERTIES                                   | TYPICAL VALUES | UNITS             | TEST METHODS |
|----------------------------------------------|----------------|-------------------|--------------|
| <b>MECHANICAL <sup>(1)</sup></b>             |                |                   |              |
| Tensile Stress, break                        | 185            | MPa               | ASTM D638    |
| Tensile Strain, break                        | 1.5            | %                 | ASTM D638    |
| Tensile Modulus, 50 mm/min                   | 17920          | MPa               | ASTM D638    |
| Flexural Stress                              | 268            | MPa               | ASTM D790    |
| Flexural Modulus                             | 15850          | MPa               | ASTM D790    |
| <b>IMPACT <sup>(1)</sup></b>                 |                |                   |              |
| Izod Impact, unnotched, 23°C                 | 485            | J/m               | ASTM D4812   |
| Izod Impact, notched, 23°C                   | 69             | J/m               | ASTM D256    |
| <b>THERMAL <sup>(1)</sup></b>                |                |                   |              |
| HDT, 1.82 MPa, 3.2mm, unannealed             | 212            | °C                | ASTM D648    |
| CTE, -40°C to 40°C, flow                     | 2.52E-05       | 1/°C              | ASTM E831    |
| CTE, -40°C to 40°C, xflow                    | 2.34E-05       | 1/°C              | ASTM E831    |
| <b>PHYSICAL <sup>(1)</sup></b>               |                |                   |              |
| Density                                      | 1.57           | g/cm <sup>3</sup> | ASTM D792    |
| Mold Shrinkage, flow, 24 hrs <sup>(2)</sup>  | 0.1 – 0.2      | %                 | ASTM D955    |
| Mold Shrinkage, xflow, 24 hrs <sup>(2)</sup> | 0.3 – 0.4      | %                 | ASTM D955    |
| <b>INJECTION MOLDING <sup>(3)</sup></b>      |                |                   |              |
| Drying Temperature                           | 150            | °C                |              |
| Drying Time                                  | 4 – 6          | Hrs               |              |

| PROPERTIES                          | TYPICAL VALUES | UNITS | TEST METHODS |
|-------------------------------------|----------------|-------|--------------|
| Maximum Moisture Content            | 0.02           | %     |              |
| Melt Temperature                    | 360 – 400      | °C    |              |
| Rear - Zone 1 Temperature           | 360 – 380      | °C    |              |
| Middle - Zone 2 Temperature         | 370 – 390      | °C    |              |
| Front - Zone 3 Temperature          | 380 – 400      | °C    |              |
| Nozzle Temperature                  | 390 – 400      | °C    |              |
| Mold Temperature                    | 140 – 180      | °C    |              |
| Back Pressure                       | 0.3 – 0.7      | MPa   |              |
| Screw speed (Circumferential speed) | 0.2 – 0.3      | m/s   |              |
| Vent Depth                          | 0.025 – 0.076  | mm    |              |

- (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) 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.
- (3) 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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