

# LNPTM COLORCOMPTM COMPOUND 61000EUI

## DESCRIPTION

LNP COLORCOMP 61000EUI compound is based on Polycarbonate / Polybutylene Terephthalate (PC/PBT) alloy. Added features of this grade include: Impact Modified, Improved Retention of Mechanical Properties under UV Exposure and Excellent Low Temperature Impact and Chemical Resistance.

| GENERAL INFORMATION   |  |
|-----------------------|--|
| Features              | Chemical Resistance, Aesthetics/Visual effects, Impact resistant, Low temperature impact, Weatherable/UV stable, No PFAS intentionally added |
| Fillers               | Unreinforced   |
| Polymer Types         | Polycarbonate + PBT (PC+PBT)   |
| Processing Techniques | Injection Molding  |

  

| INDUSTRY                   | SUB INDUSTRY                      |
|----------------------------|-----------------------------------|
| Automotive                 | Automotive Interiors              |
| Consumer                   | Sport/Leisure, Personal Accessory |
| Electrical and Electronics | Mobile Phone - Computer - Tablets |
| Industrial                 | Electrical                        |

## TYPICAL PROPERTY VALUES

Revision 20231109

| PROPERTIES                                   | TYPICAL VALUES | UNITS             | TEST METHODS |
|--|----------------|-------------------|--------------|
| MECHANICAL <sup>(1)</sup>                    |                |                   |              |
| Tensile Stress, yld, Type I, 50 mm/min       | 53             | MPa               | ASTM D638    |
| Tensile Stress, brk, Type I, 50 mm/min       | 51             | MPa               | ASTM D638    |
| Tensile Strain, yld, Type I, 50 mm/min       | 4              | %                 | ASTM D638    |
| Tensile Strain, brk, Type I, 50 mm/min       | 120            | %                 | ASTM D638    |
| Tensile Modulus, 50 mm/min                   | 2250           | MPa               | ASTM D638    |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 84             | MPa               | ASTM D790    |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 2030           | MPa               | ASTM D790    |
| Tensile Stress, yield, 50 mm/min             | 50             | MPa               | ISO 527      |
| Tensile Stress, break, 50 mm/min             | 50             | MPa               | ISO 527      |
| Tensile Strain, yield, 50 mm/min             | 4              | %                 | ISO 527      |
| Tensile Strain, break, 50 mm/min             | 120            | %                 | ISO 527      |
| Tensile Modulus, 1 mm/min                    | 2050           | MPa               | ISO 527      |
| Flexural Stress, yield, 2 mm/min             | 80             | MPa               | ISO 178      |
| Flexural Modulus, 2 mm/min                   | 2000           | MPa               | ISO 178      |
| IMPACT <sup>(1)</sup>                        |                |                   |              |
| Izod Impact, notched, 23°C                   | 710            | J/m               | ASTM D256    |
| Izod Impact, notched, -30°C                  | 530            | J/m               | ASTM D256    |
| Izod Impact, notched, -40°C                  | 299            | J/m               | ASTM D256    |
| Instrumented Dart Impact Total Energy, 23°C  | 60             | J                 | ASTM D3763   |
| Izod Impact, notched 80*10*4 +23°C           | 50             | kJ/m <sup>2</sup> | ISO 180/1A   |
| Izod Impact, notched 80*10*4 -30°C           | 30             | kJ/m <sup>2</sup> | ISO 180/1A   |

| PROPERTIES  | TYPICAL VALUES                    | UNITS      | TEST METHODS |
|---|-----------------------------------|------------|--------------|
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm          | 55                                | kJ/m²      | ISO 179/1eA  |
| THERMAL <sup>(1)</sup>                              |                                   |            |              |
| Vicat Softening Temp, Rate B/50                     | 122                               | °C         | ASTM D1525   |
| HDT, 1.82 MPa, 3.2mm, unannealed                    | 84                                | °C         | ASTM D648    |
| HDT, 0.45 MPa, 6.4 mm, unannealed                   | 107                               | °C         | ASTM D648    |
| HDT, 1.82 MPa, 6.4 mm, unannealed                   | 99                                | °C         | ASTM D648    |
| CTE, -40°C to 40°C, flow                            | 9.5E-05                           | 1/°C       | ASTM E831    |
| CTE, -40°C to 40°C, xflow                           | 9.5E-05                           | 1/°C       | ASTM E831    |
| CTE, -40°C to 40°C, flow                            | 9.5E-05                           | 1/°C       | ISO 11359-2  |
| CTE, -40°C to 40°C, xflow                           | 9.5E-05                           | 1/°C       | ISO 11359-2  |
| Vicat Softening Temp, Rate B/50                     | 120                               | °C         | ISO 306      |
| Vicat Softening Temp, Rate B/120                    | 125                               | °C         | ISO 306      |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm               | 75                                | °C         | ISO 75/Af    |
| Relative Temp Index, Elec <sup>(2)</sup>            | 75                                | °C         | UL 746B      |
| Relative Temp Index, Mech w/impact <sup>(2)</sup>   | 75                                | °C         | UL 746B      |
| Relative Temp Index, Mech w/o impact <sup>(2)</sup> | 75                                | °C         | UL 746B      |
| PHYSICAL <sup>(1)</sup>                             |                                   |            |              |
| Specific Gravity                                    | 1.21                              | -          | ASTM D792    |
| Specific Volume                                     | 0.83                              | cm³/g      | ASTM D792    |
| Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup>         | 0.8 – 1                           | %          | SABIC method |
| Mold Shrinkage on Tensile Bar, xflow <sup>(3)</sup> | 0.8 – 1                           | %          | SABIC method |
| Density   | 1.22                              | g/cm³      | ISO 1183     |
| Water Absorption, (23°C/saturated)                  | 0.5                               | %          | ISO 62-1     |
| Moisture Absorption (23°C / 50% RH)                 | 0.15                              | %          | ISO 62       |
| Melt Flow Rate, 250°C/5.0 kg                        | 16                                | g/10 min   | ISO 1133     |
| Melt Volume Rate, MVR at 250°C/5.0 kg               | 15                                | cm³/10 min | ISO 1133     |
| ELECTRICAL <sup>(1)</sup>                           |                                   |            |              |
| Comparative Tracking Index (UL) {PLC}               | 1                                 | PLC Code   | UL 746A      |
| Hot-Wire Ignition (HWI), PLC 3                      | ≥1.5                              | mm         | UL 746A      |
| 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}                      | 5                                 | PLC Code   | ASTM D495    |
| FLAME CHARACTERISTICS <sup>(2)</sup>                |                                   |            |              |
| UL Yellow Card Link                                 | <a href="#">E121562-103952713</a> | -          | -            |
| UL Yellow Card Link 2                               | <a href="#">E207780-103938363</a> | -          | -            |
| UL Recognized, 94HB Flame Class Rating              | ≥1.5                              | mm         | UL 94        |
| UV-light, water exposure/immersion                  | F2                                | -          | UL 746C      |
| INJECTION MOLDING <sup>(4)</sup>                    |                                   |            |              |
| Drying Temperature                                  | 110                               | °C         |              |
| Drying Time   | 4 – 6                             | Hrs        |              |
| Drying Time (Cumulative)                            | 8                                 | Hrs        |              |
| Maximum Moisture Content                            | 0.02                              | %          |              |
| Melt Temperature                                    | 260 – 275                         | °C         |              |
| Nozzle Temperature                                  | 255 – 270                         | °C         |              |
| Front - Zone 3 Temperature                          | 255 – 275                         | °C         |              |

| PROPERTIES                  | TYPICAL VALUES | UNITS | TEST METHODS |
|-----------------------------|----------------|-------|--------------|
| Middle - Zone 2 Temperature | 250 – 270      | °C    |              |
| Rear - Zone 1 Temperature   | 245 – 265      | °C    |              |
| Mold Temperature            | 65 – 90        | °C    |              |
| Back Pressure               | 0.3 – 0.7      | MPa   |              |
| Screw Speed                 | 50 – 80        | rpm   |              |
| Shot to Cylinder Size       | 50 – 80        | %     |              |
| Vent Depth                  | 0.013 – 0.02   | 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) 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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