

# LNPT<sup>™</sup> LUBRICOMP<sup>™</sup> COMPOUND DCL33E

DCL4033

## DESCRIPTION

LNP LUBRICOMP DCL33E compound is based on Polycarbonate (PC) resin containing 15% carbon fiber and 15% PTFE. Added features of this grade include: Wear Resistant, Electrically Conductive, Easy Molding.

| GENERAL INFORMATION   |   |
|-----------------------|---|
| Features              | Electrically Conductive, Good Processability, Wear resistant, High stiffness/Strength |
| Fillers               | Carbon Fiber, PTFE  |
| Polymer Types         | Polycarbonate (PC)  |
| Processing Techniques | Injection Molding   |

| INDUSTRY                   | SUB INDUSTRY   |
|----------------------------|--|
| Building and Construction  | Building Component   |
| Consumer                   | Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance |
| 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, 5 mm/min                     | 121                              | MPa               | ISO 527      |
| Tensile Strain, break, 5 mm/min                     | 1.8                              | %                 | ISO 527      |
| Flexural Stress, break, 2 mm/min                    | 177                              | MPa               | ISO 178      |
| Flexural Modulus, 2 mm/min                          | 11900                            | MPa               | ISO 178      |
| <b>IMPACT <sup>(1)</sup></b>                        |                                  |                   |              |
| Izod Impact, unnotched 80*10*4 +23°C                | 25                               | kJ/m <sup>2</sup> | ISO 180/1U   |
| Izod Impact, notched 80*10*4 +23°C                  | 6                                | kJ/m <sup>2</sup> | ISO 180/1A   |
| <b>THERMAL <sup>(1)</sup></b>                       |                                  |                   |              |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm               | 139                              | °C                | ISO 75/Af    |
| Relative Temp Index, Elec <sup>(2)</sup>            | 80                               | °C                | UL 746B      |
| Relative Temp Index, Mech w/impact <sup>(2)</sup>   | 80                               | °C                | UL 746B      |
| Relative Temp Index, Mech w/o impact <sup>(2)</sup> | 80                               | °C                | UL 746B      |
| <b>PHYSICAL <sup>(1)</sup></b>                      |                                  |                   |              |
| Mold Shrinkage, flow <sup>(3)</sup>                 | 0.15 – 0.3                       | %                 | SABIC method |
| Density   | 1.35                             | g/cm <sup>3</sup> | ISO 1183     |
| <b>ELECTRICAL <sup>(1)</sup></b>                    |                                  |                   |              |
| Surface Resistivity                                 | 1.E+02 – 1.E+04                  | Ω                 | ASTM D257    |
| <b>FLAME CHARACTERISTICS <sup>(2)</sup></b>         |                                  |                   |              |
| UL Yellow Card Link                                 | <a href="#">E45329-101343782</a> | -                 | -            |

| PROPERTIES                              | TYPICAL VALUES | UNITS | TEST METHODS |
|---|----------------|-------|--------------|
| UL Recognized, 94V-0 Flame Class Rating | ≥4.5           | mm    | UL 94        |
| UL Recognized, 94HB Flame Class Rating  | ≥0.8           | mm    | UL 94        |
| <b>INJECTION MOLDING <sup>(4)</sup></b> |                |       |              |
| Drying Temperature                      | 120            | °C    |              |
| Drying Time                             | 4              | Hrs   |              |
| Maximum Moisture Content                | 0.02           | %     |              |
| Melt Temperature                        | 305 – 325      | °C    |              |
| Front - Zone 3 Temperature              | 320 – 330      | °C    |              |
| Middle - Zone 2 Temperature             | 310 – 320      | °C    |              |
| Rear - Zone 1 Temperature               | 295 – 305      | °C    |              |
| Mold Temperature                        | 80 – 110       | °C    |              |
| Back Pressure                           | 0.2 – 0.3      | 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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