

# LNP™ STAT-KON™ DE004 compound

Polycarbonate  
SABIC Innovative Plastics

Message:

LNP STAT-KON\* DE004 is a compound based on Polycarbonate resin containing Carbon Fiber. Added features of this material include: Electrically Conductive.

Also known as: LNP\* STAT-KON\* Compound DC-1004

Product reorder name: DE004

| General Information               |                                  |                   |                     |
|-----------------------------------|----------------------------------|-------------------|---------------------|
| UL YellowCard                     | E207780-101282818                |                   |                     |
| Filler / Reinforcement            | Carbon fiber reinforced material |                   |                     |
| Features                          | Conductivity                     |                   |                     |
| Processing Method                 | Injection molding                |                   |                     |
| Physical                          | Nominal Value                    | Unit              | Test Method         |
| Specific Gravity                  | 1.27                             | g/cm <sup>3</sup> | ASTM D792, ISO 1183 |
| Molding Shrinkage                 |                                  |                   |                     |
| Flow: 24 hours                    | 0.040 - 0.10                     | %                 | ASTM D955           |
| Transverse flow: 24 hours         | 0.30 - 0.40                      | %                 | ASTM D955           |
| Vertical flow direction: 24 hours | 0.37 - 0.45                      | %                 | ISO 294-4           |
| Flow direction: 24 hours          | 0.040 - 0.090                    | %                 | ISO 294-4           |
| Water Absorption                  |                                  |                   |                     |
| 24 hr, 50% RH                     | 0.15                             | %                 | ASTM D570           |
| Equilibrium, 23°C, 50% RH         | 0.22                             | %                 | ISO 62              |
| Mechanical                        | Nominal Value                    | Unit              | Test Method         |
| Tensile Modulus                   |                                  |                   |                     |
| -- <sup>1</sup>                   | 10900                            | MPa               | ASTM D638           |
| --                                | 10600                            | MPa               | ISO 527-2/1         |
| Tensile Strength                  |                                  |                   |                     |
| Fracture                          | 121                              | MPa               | ASTM D638           |
| Fracture                          | 114                              | MPa               | ISO 527-2           |
| Tensile Elongation                |                                  |                   |                     |
| Fracture                          | 2.2                              | %                 | ASTM D638           |
| Fracture                          | 1.6                              | %                 | ISO 527-2           |
| Flexural Modulus                  |                                  |                   |                     |
| --                                | 9790                             | MPa               | ASTM D790           |
| --                                | 9780                             | MPa               | ISO 178             |
| Flexural Strength                 |                                  |                   |                     |
| --                                | 196                              | MPa               | ASTM D790           |
| --                                | 188                              | MPa               | ISO 178             |
| Impact                            | Nominal Value                    | Unit              | Test Method         |

|                                                |               |                   |             |
|------------------------------------------------|---------------|-------------------|-------------|
| Notched Izod Impact                            |               |                   |             |
| 23°C                                           | 73            | J/m               | ASTM D256   |
| 23°C <sup>2</sup>                              | 6.9           | kJ/m <sup>2</sup> | ISO 180/1A  |
| Unnotched Izod Impact                          |               |                   |             |
| 23°C                                           | 490           | J/m               | ASTM D4812  |
| 23°C <sup>3</sup>                              | 33            | kJ/m <sup>2</sup> | ISO 180/1U  |
| Instrumented Dart Impact                       |               |                   |             |
| 23°C, Energy at Peak Load                      | 15.6          | J                 | ASTM D3763  |
| --                                             | 3.41          | J                 | ISO 6603-2  |
| Thermal                                        | Nominal Value | Unit              | Test Method |
| Deflection Temperature Under Load              |               |                   |             |
| 0.45 MPa, unannealed, 3.20mm                   | 147           | °C                | ASTM D648   |
| 0.45 MPa, unannealed, 64.0mm span <sup>4</sup> | 149           | °C                | ISO 75-2/Bf |
| 1.8 MPa, unannealed, 3.20mm                    | 144           | °C                | ASTM D648   |
| 1.8 MPa, unannealed, 64.0mm span <sup>5</sup>  | 144           | °C                | ISO 75-2/Af |
| Linear thermal expansion coefficient           |               |                   |             |
| Flow: -40 to 40°C                              | 1.4E-5        | cm/cm/°C          | ASTM E831   |
| Flow: -40 to 40°C                              | 1.3E-5        | cm/cm/°C          | ISO 11359-2 |
| Lateral: -40 to 40°C                           | 4.2E-5        | cm/cm/°C          | ASTM E831   |
| Lateral: -40 to 40°C                           | 4.3E-5        | cm/cm/°C          | ISO 11359-2 |
| Electrical                                     | Nominal Value | Unit              | Test Method |
| Surface Resistivity                            | 10 - 1.0E+4   | ohms              | ASTM D257   |
| Injection                                      | Nominal Value | Unit              |             |
| Drying Temperature                             | 121           | °C                |             |
| Drying Time                                    | 4.0           | hr                |             |
| Suggested Max Moisture                         | 0.020         | %                 |             |
| Rear Temperature                               | 293 - 304     | °C                |             |
| Middle Temperature                             | 310 - 321     | °C                |             |
| Front Temperature                              | 321 - 332     | °C                |             |
| Processing (Melt) Temp                         | 304 - 327     | °C                |             |
| Mold Temperature                               | 82.2 - 110    | °C                |             |
| Back Pressure                                  | 0.172 - 0.344 | MPa               |             |
| Screw Speed                                    | 30 - 60       | rpm               |             |
| NOTE                                           |               |                   |             |
| 1.                                             | 50 mm/min     |                   |             |
| 2.                                             | 80*10*4       |                   |             |
| 3.                                             | 80*10*4       |                   |             |
| 4.                                             | 80*10*4 mm    |                   |             |
| 5.                                             | 80*10*4 mm    |                   |             |

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