

LNPTM STAT-KONTM COMPOUND DX05042

DESCRIPTION

LNP STAT-KON DX05042 compound is based on Polycarbonate (PC) resin containing 10% PTFE, 20% carbon fiber, 5% glass fiber. Added features of this grade include: Electrically Conductive, Wear Resistant, Easy Molding.

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

| INDUSTRY | SUB INDUSTRY |
|----------------------------|-----------------------|
| Electrical and Electronics | Electronic Components |
| Industrial | Material Handling |

TYPICAL PROPERTY VALUES

Revision 20231109

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------------------|--------------|
| MECHANICAL ⁽¹⁾ | | | |
| Tensile Stress, break, 5 mm/min | 167 | MPa | ISO 527 |
| Tensile Strain, break, 5 mm/min | 2.1 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 16400 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 256 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 14100 | MPa | ISO 178 |
| Tensile Stress, brk, Type I, 5 mm/min | 169 | MPa | ASTM D638 |
| Tensile Strain, brk, Type I, 5 mm/min | 2.4 | % | ASTM D638 |
| Tensile Modulus, 5 mm/min | 16400 | MPa | ASTM D638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 248 | MPa | ASTM D790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 13100 | MPa | ASTM D790 |
| IMPACT ⁽¹⁾ | | | |
| Izod Impact, notched 80*10*4 +23°C | 11 | kJ/m ² | ISO 180/1A |
| Izod Impact, unnotched 80*10*4 +23°C | 45 | kJ/m ² | ISO 180/1U |
| Izod Impact, notched, 23°C | 100 | J/m | ASTM D256 |
| Izod Impact, unnotched, 23°C | 640 | J/m | ASTM D4812 |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm | 11 | kJ/m ² | ISO 179/1eA |
| Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm | 45 | kJ/m ² | ISO 179/1eU |
| THERMAL ⁽¹⁾ | | | |
| Vicat Softening Temp, Rate B/50 | 143 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/50 | 143 | °C | ASTM D1525 |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 144 | °C | ISO 75/Bf |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 137 | °C | ISO 75/Af |
| HDT, 1.82 MPa, 3.2mm, unannealed | 135 | °C | ASTM D648 |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|-----------------|--|-----------------------------|
| CTE, 23°C to 80°C, flow | 1.0E-05 | 1/°C | ISO 11359-2 |
| CTE, 23°C to 80°C, xflow | 8.4E-05 | 1/°C | ISO 11359-2 |
| CTE, -40°C to 40°C, flow | 0.8E-05 | 1/°C | ASTM E831 |
| CTE, -40°C to 40°C, xflow | 7.5E-05 | 1/°C | ASTM E831 |
| PHYSICAL ⁽¹⁾ | | | |
| Mold Shrinkage, flow ⁽²⁾ | 0.2 – 0.4 | % | SABIC method |
| Mold Shrinkage, xflow ⁽²⁾ | 0.4 | % | SABIC method |
| Density | 1.37 | g/cm ³ | ISO 1183 |
| Moisture Absorption (23°C / 50% RH) | 0.08 | % | ISO 62 |
| Moisture Absorption, (23°C/50% RH/24 hrs) | 0.02 | % | ASTM D570 |
| Water Absorption, (23°C/24hrs) | 0.15 | % | ASTM D570 |
| Water Absorption, (23°C/saturated) | 0.27 | % | ISO 62-1 |
| Wear Factor Washer | 36 | 10 ⁻¹⁰ in ⁴ 5-min/ft-lb-hr | ASTM D3702 Modified: Manual |
| Dynamic COF | 0.23 | - | ASTM D3702 Modified: Manual |
| Static COF | 0.39 | - | ASTM D3702 Modified: Manual |
| ELECTRICAL ⁽¹⁾ | | | |
| Surface Resistivity ⁽³⁾ | 1.E+02 – 1.E+03 | Ω | ASTM D257 |
| INJECTION MOLDING ⁽⁴⁾ | | | |
| 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) 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) Measurement meets requirements as specified in ASTM D4496.
- (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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