

LNPTM KONDUIT™ COMPOUND PX10323

REGION ASIA

DESCRIPTION

LNP KONDUIT PX10323 compound is based on Nylon 6 resin containing glass fiber and proprietary thermal filler. Added features of this grade include: Thermally Conductive.

| GENERAL INFORMATION | |
|-----------------------|---|
| Features | Thermally Conductive, No PFAS intentionally added |
| Fillers | Glass Fiber, Proprietary Filler |
| Polymer Types | Polyamide 6 (Nylon 6) |
| Processing Techniques | Injection Molding |

| INDUSTRY | SUB INDUSTRY |
|----------------------------|---|
| Building and Construction | Building Component |
| Consumer | Home Appliances |
| Electrical and Electronics | Mobile Phone - Computer - Tablets, Lighting |
| Industrial | Electrical, Material Handling |

TYPICAL PROPERTY VALUES

Revision 20231109

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------------------|--------------|
| MECHANICAL ⁽¹⁾ | | | |
| Tensile Stress, brk, Type I, 5 mm/min | 70 | MPa | ASTM D638 |
| Tensile Strain, brk, Type I, 5 mm/min | 0.9 | % | ASTM D638 |
| Tensile Modulus, 5 mm/min | 13700 | MPa | ASTM D638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 96 | MPa | ASTM D790 |
| Flexural Stress, brk, 1.3 mm/min, 50 mm span | 95 | MPa | ASTM D790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 14200 | MPa | ASTM D790 |
| Tensile Stress, break, 5 mm/min | 73 | MPa | ISO 527 |
| Tensile Strain, break, 5 mm/min | 0.8 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 14000 | MPa | ISO 527 |
| Flexural Stress, break, 2 mm/min | 96 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 14300 | MPa | ISO 178 |
| Impact Strength | 3.7 – 6.8 | kJ/m ² | ISO R179 |
| IMPACT ⁽¹⁾ | | | |
| Izod Impact, unnotched, 23°C | 73 | J/m | ASTM D4812 |
| Izod Impact, notched, 23°C | 30 | J/m | ASTM D256 |
| Izod Impact, unnotched 80*10*4 +23°C | 6 | kJ/m ² | ISO 180/1U |
| Izod Impact, notched 80*10*4 +23°C | 3 | kJ/m ² | ISO 180/1A |
| THERMAL ⁽¹⁾ | | | |
| HDT, 1.82 MPa, 6.4 mm, unannealed | 204 | °C | ASTM D648 |
| CTE, 40°C to 120°C, flow | 1.24E-05 | 1/°C | ASTM E831 |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------------------|----------------|
| CTE, 40°C to 120°C, xflow | 7.27E-05 | 1/°C | ASTM E831 |
| Thermal Conductivity through-plane, 60*60*3mm plaque | 1.5 | W/m-K | ISO 22007-2 |
| Thermal Conductivity in-plane, 60*60*3mm plaque | 18 | W/m-K | ISO 22007-2 |
| Thermal Conductivity through-plane, 10*10*3mm sample | 3.5 | W/m-K | ASTM E1461-07 |
| Thermal Conductivity in-plane, 25*0.4mm disc | 15 | W/m-K | ASTM E1461-07 |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 217 | °C | ISO 75/Bf |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 201 | °C | ISO 75/Af |
| PHYSICAL ⁽¹⁾ | | | |
| Density | 1.61 | g/cm ³ | ASTM D792 |
| Mold Shrinkage, flow, 24 hrs ⁽²⁾ | 0.2 | % | ASTM D955 |
| Mold Shrinkage, xflow, 24 hrs ⁽²⁾ | 0.22 | % | ASTM D955 |
| Moisture Absorption (23°C / 50% RH) | 0.04 | % | ISO 62 |
| ELECTRICAL ⁽¹⁾ | | | |
| Surface Resistivity | 1.05E+06 | Ω | ASTM D257 |
| FLAME CHARACTERISTICS ⁽³⁾ | | | |
| Glow Wire Flammability Index 850°C, passes at | 1 | mm | IEC 60695-2-12 |
| Glow Wire Flammability Index 960°C, passes at | 1.6 | mm | IEC 60695-2-12 |
| Glow Wire Ignitability Temperature, 1.0 mm | 825 | °C | IEC 60695-2-13 |
| INJECTION MOLDING ⁽⁴⁾ | | | |
| Drying Temperature | 80 | °C | |
| Drying Time | 4 | Hrs | |
| Maximum Moisture Content | 0.15 – 0.25 | % | |
| Melt Temperature | 270 – 295 | °C | |
| Front - Zone 3 Temperature | 270 – 290 | °C | |
| Middle - Zone 2 Temperature | 270 – 290 | °C | |
| Rear - Zone 1 Temperature | 260 – 275 | °C | |
| Mold Temperature | 85 – 100 | °C | |
| Back Pressure | 0.2 – 0.3 | MPa | |
| Screw Speed | 20 – 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) 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.
- (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.

ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

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