

SABIC Innovative Plastics LNP KONDUIT PX08322 PA 6

Category : Polymer , Thermoplastic , Nylon , Nylon 6

Material Notes:

LNP* Konduit* PX08322 is a compound based on PA6 resin containing mineral. Added features include: Thermally Conductive, Flame Retardant

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-KONDUIT-PX08322-PA-6.php

| Physical Properties | Metric | English | Comments |
|-----------------------------------|---|---|-----------------------|
| Density | 1.52 g/cc | 0.0549 lb/in ³ | ASTM D792 |
| Water Absorption | 0.39 % @Time 86400 sec | 0.39 % @Time 24.0 hour | SABIC Method |
| Moisture Absorption | 0.0600 % | 0.0600 % | 23°C / 50% RH; ISO 62 |
| Linear Mold Shrinkage, Flow | 0.0050 cm/cm @Time 86400 sec | 0.0050 in/in @Time 24.0 hour | ASTM D955 |
| Linear Mold Shrinkage, Transverse | 0.0045 cm/cm @Time 86400 sec | 0.0045 in/in @Time 24.0 hour | ASTM D955 |
| Melt Flow | 15.3 g/10 min @Load 6.70 kg, Temperature 285 °C | 15.3 g/10 min @Load 14.8 lb, Temperature 545 °F | ASTM D1238 |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|------------|----------------|-----------------------------------|
| Tensile Strength at Break | 54.0 MPa | 7830 psi | Type I, 5 mm/min; ASTM D638 |
| Elongation at Break | 0.70 % | 0.70 % | Type I, 5 mm/min; ASTM D638 |
| Tensile Modulus | 11.79 GPa | 1710 ksi | 50 mm/min; ASTM D638 |
| Flexural Strength | 82.0 MPa | 11900 psi | 1.3 mm/min, 50 mm span; ASTM D790 |
| Flexural Modulus | 11.7 GPa | 1700 ksi | 1.3 mm/min, 50 mm span; ASTM D790 |
| Izod Impact, Notched | 0.170 J/cm | 0.318 ft-lb/in | ASTM D256 |
| Izod Impact, Unnotched | 0.880 J/cm | 1.65 ft-lb/in | ASTM D4812 |

| Thermal Properties | Metric | English | Comments |
|-------------------------------|--------------|----------------|------------|
| CTE, linear, Parallel to Flow | 21.5 µm/m-°C | 11.9 µin/in-°F | ASTM E 831 |

| Thermal Properties | Metric @Temperature -40.0 - 40.0 °C | English @Temperature -40.0 - 104 °F | Comments |
|---|--|--|---|
| | 27.1 µm/m-°C | 15.1 µin/in-°F | ASTM E 831 |
| | @Temperature 40.0 - 120 °C | @Temperature 104 - 248 °F | |
| CTE, linear, Transverse to Flow | 35.4 µm/m-°C | 19.7 µin/in-°F | ASTM E 831 |
| | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F | |
| | 58.3 µm/m-°C | 32.4 µin/in-°F | ASTM E 831 |
| | @Temperature 40.0 - 120 °C | @Temperature 104 - 248 °F | |
| Thermal Conductivity | 0.920 W/m-K | 6.38 BTU-in/hr-ft ² -°F | through-plane, ø80*3mm discs; ISO 22007-2 |
| | 2.10 W/m-K | 14.6 BTU-in/hr-ft ² -°F | through-plane, 10*10*3mm sample; ASTM E 1461-07 |
| | 5.09 W/m-K | 35.3 BTU-in/hr-ft ² -°F | in-plane, ø80*3mm discs; ISO 22007-2 |
| | 8.10 W/m-K | 56.2 BTU-in/hr-ft ² -°F | in-plane, ø25*0.4mm disc; ASTM E 1461-07 |
| Deflection Temperature at 1.8 MPa (264 psi) | 180 °C | 356 °F | unannealed; ASTM D648 |
| | @Thickness 6.40 mm | @Thickness 0.252 in | |
| Flammability, UL94 | V-0 | V-0 | UL 94 |
| | @Thickness 1.20 mm | @Thickness 0.0472 in | |
| Glow Wire Test | 825 °C | 1520 °F | IEC 60695-2-13 |
| | 960 °C | 1760 °F | IEC 60695-2-12 |
| | @Thickness 1.00 mm | @Thickness 0.0394 in | |

| Electrical Properties | Metric | English | Comments |
|-----------------------|---------------------------|---------------------------|-------------------|
| Surface Resistance | >= 1.00e+15 ohm | >= 1.00e+15 ohm | ASTM D257 |
| Dielectric Constant | 4.8 | 4.8 | ASTM D150 |
| | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz | |
| | 7.27 | 7.27 | ASTM D150 |
| | @Frequency 50.0 - 60.0 Hz | @Frequency 50.0 - 60.0 Hz | |
| Dielectric Strength | 14.1 kV/mm | 358 kV/in | in oil; ASTM D149 |
| | @Thickness 1.00 mm | @Thickness 0.0394 in | |

| Electrical Properties | Metric | English | Comments |
|----------------------------|------------------------------|------------------------------|-----------|
| Dissipation Factor | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz | ASTM D150 |
| | 0.083 | 0.083 | |
| | @Frequency 50.0 - 60.0 Hz | @Frequency 50.0 - 60.0 Hz | ASTM D150 |
| Comparative Tracking Index | 575 V | 575 V | IEC 60112 |
| Hot Wire Ignition, HWI | >= 120 sec | >= 120 sec | UL 746A |
| High Amp Arc Ignition, HAI | >= 120 arcs | >= 120 arcs | UL 746A |

| Descriptive Properties | Value | Comments |
|---|--------|----------|
| Water Immersion, Start F1 from 1mm onward | PASSES | UL 746C |
| | PASSES | UL 746C |

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