

SABIC Innovative Plastics LNP KONDUIT PX09322 PA 6 (Asia Pacific)

Category : Polymer , Thermoplastic , Nylon , Nylon 6

Material Notes:

White colored thermally conductive mineral filled PA6 FR compound

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-KONDUIT-PX09322-PA-6-Asia-Pacific.php

| Physical Properties | Metric | English | Comments |
|-----------------------------------|--------------|---------------------------|---------------------------|
| Density | 1.52 g/cc | 0.0549 lb/in ³ | ASTM D792 |
| Moisture Absorption | 0.0600 % | 0.0600 % | 50% RH, 24 hrs; ASTM D570 |
| Linear Mold Shrinkage, Flow | 0.0058 cm/cm | 0.0058 in/in | SABIC Method |
| Linear Mold Shrinkage, Transverse | 0.0053 cm/cm | 0.0053 in/in | SABIC Method |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|------------|----------------|-----------------------------------|
| Tensile Strength at Break | 51.0 MPa | 7400 psi | Type I, 5 mm/min; ASTM D638 |
| Elongation at Break | 0.80 % | 0.80 % | Type I, 5 mm/min; ASTM D638 |
| Tensile Modulus | 10.42 GPa | 1511 ksi | 50 mm/min; ASTM D638 |
| Flexural Strength | 81.0 MPa | 11700 psi | 1.3 mm/min, 50 mm span; ASTM D790 |
| Flexural Yield Strength | 80.0 MPa | 11600 psi | 1.3 mm/min, 50 mm span; ASTM D790 |
| Flexural Modulus | 10.96 GPa | 1590 ksi | 1.3 mm/min, 50 mm span; ASTM D790 |
| Izod Impact, Notched | 0.220 J/cm | 0.412 ft-lb/in | ASTM D256 |
| Izod Impact, Unnotched | 1.31 J/cm | 2.45 ft-lb/in | ASTM D4812 |

| Thermal Properties | Metric | English | Comments |
|---------------------------------|--|---|--|
| CTE, linear, Parallel to Flow | 23.7 $\mu\text{m}/\text{m}\cdot\text{C}$ | 13.2 $\mu\text{in}/\text{in}\cdot\text{F}$ | ASTM E 831 |
| | @Temperature -40.0 - 40.0 $^{\circ}\text{C}$ | @Temperature -40.0 - 104 $^{\circ}\text{F}$ | |
| CTE, linear, Transverse to Flow | 36.7 $\mu\text{m}/\text{m}\cdot\text{C}$ | 20.4 $\mu\text{in}/\text{in}\cdot\text{F}$ | ASTM E 831 |
| | @Temperature -40.0 - 40.0 $^{\circ}\text{C}$ | @Temperature -40.0 - 104 $^{\circ}\text{F}$ | |
| Thermal Conductivity | 0.860 W/m-K | 5.97 BTU-in/hr-ft ² - $^{\circ}\text{F}$ | through-plane, $\varnothing 80 \times 3\text{mm}$ discs; ISO 22007-2 |

| Thermal Properties | 1.50 W/m-K Metric | 10.4 BTU-in/hr-ft ² -°F English | through-plane, 10*10*3mm sample; ASTM E 1461-07 Comments |
|---|------------------------------|---|--|
| | 2.68 W/m-K | 18.6 BTU-in/hr-ft ² -°F | in-plane, ø80*3mm discs; ISO 22007-2 |
| | 6.00 W/m-K | 41.6 BTU-in/hr-ft ² -°F | in-plane, ø25*0.4mm disc; ASTM E 1461-07 |
| Deflection Temperature at 0.46 MPa (66 psi) | 210 °C @Thickness 6.40 mm | 410 °F @Thickness 0.252 in | unannealed; ASTM D648 |
| Deflection Temperature at 1.8 MPa (264 psi) | 182 °C @Thickness 6.40 mm | 360 °F @Thickness 0.252 in | unannealed; ASTM D648 |
| Flammability, UL94 | V-0 @Thickness 1.20 mm | V-0 @Thickness 0.0472 in | UL 94 |
| Glow Wire Test | 960 °C @Thickness 1.00 mm | 1760 °F @Thickness 0.0394 in | IEC 60695-2-12 |

| Electrical Properties | Metric | English | Comments |
|----------------------------|--------------|--------------|-----------|
| Surface Resistance | 8.10e+14 ohm | 8.10e+14 ohm | ASTM D257 |
| Comparative Tracking Index | >= 600 V | >= 600 V | UL 746A |

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

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