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LNPTM THERMOCOMPTM COMPOUND LX97024

PDX-L-97024

DESCRIPTION

LNP THERMOCOMP LX97024 compound is based on Polyetheretherketone (PEEK) resin containing 15% glass fiber, 5% PTFE. Added features of this grade include: Internally Lubricated, Easy Molding.

| GENERAL INFORMATION | |
|-----------------------|---|
| Features | Good Processability, Wear resistant, High stiffness/Strength, High temperature resistance |
| Fillers | Glass Fiber, PTFE |
| Polymer Types | Polyetheretherketone (PEEK) |
| Processing Techniques | Injection Molding |
| | |
| | |
| INDUSTRY | SLIR INDUSTRY |

| INDUSTRY | SUB INDUSTRY |
|----------------------------|--|
| Consumer | Commercial Appliance |
| Electrical and Electronics | Electronic Components, Mobile Phone - Computer - Tablets |
| Industrial | Flectrical Material Handling |

TYPICAL PROPERTY VALUES

Revision 20231109

| MECHANICAL (1) Tensile Stress, break, 5 mm/min 114 MPa ISO 527 Tensile Strain, break, 5 mm/min 2.3 % ISO 527 Tensile Modulus, 1 mm/min 6900 MPa ISO 527 Flexural Stress, yield, 2 mm/min 177 MPa ISO 178 Flexural Modulus, 2 mm/min 6000 MPa ISO 178 IMPACT (1) Izod Impact, unnotched 80*10*4 +23°C 30 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 5 kJ/m² ISO 180/1A THERMAL (1) CTE, 23°C to 60°C, flow 2.7E-05 1/°C ISO 11359-2 CTE, 23°C to 60°C, flow 5.E-05 1/°C ISO 11359-2 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 280 °C ISO 75/Af PHYSICAL (1) 2 1,41 g/cm³ ISO 1183 ELECTRICAL (1) Comparative Tracking Index (UL) (PLC) 4 PLC Code UL 746A | PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---------------------------------------|----------------|----------|--------------|
| Tensile Strain, break, 5 mm/min 2.3 % ISO 527 Tensile Modulus, 1 mm/min 6900 MPa ISO 527 Flexural Stress, yield, 2 mm/min 177 MPa ISO 178 Flexural Modulus, 2 mm/min 6000 MPa ISO 178 IMPACT (1) Izod Impact, unnotched 80*10*4 +23°C 30 KJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 5 KJ/m² ISO 180/1A THERMAL (1) CTE, 23°C to 60°C, flow 2.7E-05 1/°C ISO 11359-2 CTE, 23°C to 60°C, xflow 5.E-05 1/°C ISO 11359-2 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 280 °C ISO 75/Af PHYSICAL (1) Density 1.41 g/cm³ ISO 1183 ELECTRICAL (1) | MECHANICAL (1) | | | |
| Tensile Modulus, 1 mm/min 6900 MPa ISO 527 Flexural Stress, yield, 2 mm/min 177 MPa ISO 178 Flexural Modulus, 2 mm/min 6000 MPa ISO 178 IMPACT (¹¹) Izod Impact, unnotched 80*10*4 +23°C 30 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 5 kJ/m² ISO 180/1A THERMAL (¹¹) CTE, 23°C to 60°C, flow 2.7E-05 1/°C ISO 11359-2 CTE, 23°C to 60°C, xflow 5.E-05 1/°C ISO 11359-2 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 280 °C ISO 75/Af PHYSICAL (¹¹) Density 1.41 g/cm³ ISO 1183 ELECTRICAL (¹¹) | Tensile Stress, break, 5 mm/min | 114 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min 177 MPa ISO 178 Flexural Modulus, 2 mm/min 6000 MPa ISO 178 IMPACT (1) Izod Impact, unnotched 80*10*4 +23°C 30 KJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 5 KJ/m² ISO 180/1A THERMAL (1) CTE, 23°C to 60°C, flow 2.7E-05 1/°C ISO 11359-2 CTE, 23°C to 60°C, xflow 5.E-05 1/°C ISO 11359-2 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 280 °C ISO 75/Af PHYSICAL (1) Density 1.41 g/cm³ ISO 1183 ELECTRICAL (1) | Tensile Strain, break, 5 mm/min | 2.3 | % | ISO 527 |
| Flexural Modulus, 2 mm/min 6000 MPa ISO 178 IMPACT (1) Izod Impact, unnotched 80*10*4 +23°C 30 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 5 kJ/m² ISO 180/1A THERMAL (1) CTE, 23°C to 60°C, flow 2.7E-05 1/°C ISO 11359-2 CTE, 23°C to 60°C, xflow 5.E-05 1/°C ISO 11359-2 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 280 °C ISO 75/Af PHYSICAL (1) Density 1.41 g/cm³ ISO 1183 ELECTRICAL (1) | Tensile Modulus, 1 mm/min | 6900 | MPa | ISO 527 |
| IMPACT (1) Izod Impact, unnotched 80*10*4+23°C 30 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4+23°C 5 kJ/m² ISO 180/1A THERMAL (1) | Flexural Stress, yield, 2 mm/min | 177 | MPa | ISO 178 |
| Izod Impact, unnotched 80*10*4 +23°C 30 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 5 kJ/m² ISO 180/1A THERMAL (1) CTE, 23°C to 60°C, flow 2.7E-05 1/°C ISO 11359-2 CTE, 23°C to 60°C, xflow 5.E-05 1/°C ISO 11359-2 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 280 °C ISO 75/Af PHYSICAL (1) Density 1.41 g/cm³ ISO 1183 ELECTRICAL (1) | Flexural Modulus, 2 mm/min | 6000 | MPa | ISO 178 |
| Izod Impact, notched 80*10*4 +23°C 5 kJ/m² ISO 180/1A THERMAL (1) CTE, 23°C to 60°C, flow 2.7E-05 1/°C ISO 11359-2 CTE, 23°C to 60°C, xflow 5.E-05 1/°C ISO 11359-2 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 280 °C ISO 75/Af PHYSICAL (1) Density 1.41 g/cm³ ISO 1183 ELECTRICAL (1) | IMPACT (1) | | | |
| THERMAL (1) CTE, 23°C to 60°C, flow 2.7E-05 1/°C ISO 11359-2 CTE, 23°C to 60°C, xflow 5.E-05 1/°C ISO 11359-2 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 280 °C ISO 75/Af PHYSICAL (1) Density 1.41 g/cm³ ISO 1183 ELECTRICAL (1) | Izod Impact, unnotched 80*10*4 +23°C | 30 | kJ/m² | ISO 180/1U |
| CTE, 23°C to 60°C, flow 2.7E-05 1/°C ISO 11359-2 CTE, 23°C to 60°C, xflow 5.E-05 1/°C ISO 11359-2 HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 280 °C ISO 75/Af PHYSICAL (1) Density 1.41 g/cm³ ISO 1183 ELECTRICAL (1) | Izod Impact, notched 80*10*4 +23°C | 5 | kJ/m² | ISO 180/1A |
| CTE, 23°C to 60°C, xflow 5.E-05 1/°C ISO 11359-2 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 280 °C ISO 75/Af PHYSICAL (1) Density 1.41 g/cm³ ISO 1183 ELECTRICAL (1) | THERMAL (1) | | | |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 280 °C ISO 75/Af PHYSICAL (1) Density 1.41 g/cm³ ISO 1183 ELECTRICAL (1) ELECTRICAL (1) | CTE, 23°C to 60°C, flow | 2.7E-05 | 1/°C | ISO 11359-2 |
| PHYSICAL (1) Density 1.41 g/cm³ ISO 1183 ELECTRICAL (1) | CTE, 23°C to 60°C, xflow | 5.E-05 | 1/°C | ISO 11359-2 |
| Density 1.41 g/cm³ ISO 1183 ELECTRICAL (1) (1) <td>HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm</td> <td>280</td> <td>°C</td> <td>ISO 75/Af</td> | HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 280 | °C | ISO 75/Af |
| ELECTRICAL (1) | PHYSICAL (1) | | | |
| | Density | 1.41 | g/cm³ | ISO 1183 |
| Comparative Tracking Index (UL) {PLC} 4 PLC Code UL 746A | ELECTRICAL (1) | | | |
| | Comparative Tracking Index (UL) {PLC} | 4 | PLC Code | UL 746A |
| Hot-Wire Ignition (HWI), PLC 0 ≥3 mm UL 746A | Hot-Wire Ignition (HWI), PLC 0 | ≥3 | mm | UL 746A |
| Hot-Wire Ignition (HWI), PLC 1 ≥1.5 mm UL 746A | Hot-Wire Ignition (HWI), PLC 1 | ≥1.5 | mm | UL 746A |
| High Amp Arc Ignition (HAI), PLC 4 ≥1.5 mm UL 746A | High Amp Arc Ignition (HAI), PLC 4 | ≥1.5 | mm | UL 746A |
| FLAME CHARACTERISTICS (2) | FLAME CHARACTERISTICS (2) | | | |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|-------------------------|-------|----------------|
| UL Yellow Card Link | <u>E45329-101343835</u> | - | |
| UL Recognized, 94V-0 Flame Class Rating | ≥1.5 | mm | UL 94 |
| Glow Wire Ignitability Temperature, 3.0 mm | 850 | °C | IEC 60695-2-13 |
| Glow Wire Ignitability Temperature, 1.5 mm | 825 | °C | IEC 60695-2-13 |
| Glow Wire Flammability Index, 3.0 mm | 960 | °C | IEC 60695-2-12 |
| Glow Wire Flammability Index, 1.5 mm | 960 | °C | IEC 60695-2-12 |
| INJECTION MOLDING (3) | | | |
| Drying Temperature | 120 – 150 | °C | |
| Drying Time | 4 | Hrs | |
| Maximum Moisture Content | 0.1 | % | |
| Melt Temperature | 380 – 390 | °C | |
| Front - Zone 3 Temperature | 380 – 395 | °C | |
| Middle - Zone 2 Temperature | 365 – 375 | °C | |
| Rear - Zone 1 Temperature | 350 – 360 | °C | |
| Mold Temperature | 140 – 165 | °C | |
| Back Pressure | 0.3 – 0.7 | MPa | |
| Screw Speed | 60 – 100 | 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) 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.
- (3) 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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