

LNPTM LUBRICOMPTM COMPOUND SCP36

SCL-4536

DESCRIPTION

LNP LUBRICOMP SCP36 compound is based on Nylon 12 resin containing 30% carbon fiber, 15% PTFE/silicone. Added features of this grade include: Wear Resistant, Electrically Conductive.

GENERAL INFORMATION

| | |
|-----------------------|---|
| Features | Electrically Conductive, Wear resistant, Carbon fiber filled, High stiffness/Strength |
| Fillers | Carbon Fiber, PTFE/Silicone |
| Polymer Types | Polyamide 12 (Nylon 12) |
| Processing Techniques | Injection Molding |

INDUSTRY

SUB INDUSTRY

| | |
|----------------------------|--|
| Automotive | Automotive Under the Hood |
| Consumer | Home Appliances, Commercial Appliance |
| Electrical and Electronics | Electronic Components, Mobile Phone - Computer - Tablets |

TYPICAL PROPERTY VALUES

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------------------|--------------|
| MECHANICAL⁽¹⁾ | | | |
| Flexural Stress, brk, 1.3 mm/min, 50 mm span | 178 | MPa | ASTM D790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 16200 | MPa | ASTM D790 |
| Tensile Stress, break, 5 mm/min | 122 | MPa | ISO 527 |
| Tensile Strain, break, 5 mm/min | 1 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 18160 | MPa | ISO 527 |
| Flexural Modulus, 2 mm/min | 16030 | MPa | ISO 178 |
| IMPACT⁽¹⁾ | | | |
| Izod Impact, unnotched, 23°C | 508 | J/m | ASTM D4812 |
| Izod Impact, notched, 23°C | 82 | J/m | ASTM D256 |
| Multiaxial Impact | 2 | J | ISO 6603 |
| Instrumented Dart Impact Total Energy, 23°C | 10 | J | ASTM D3763 |
| Izod Impact, unnotched 80*10*4 +23°C | 34 | kJ/m ² | ISO 180/1U |
| Izod Impact, notched 80*10*4 +23°C | 7 | kJ/m ² | ISO 180/1A |
| THERMAL⁽¹⁾ | | | |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 178 | °C | ASTM D648 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 173 | °C | ASTM D648 |
| CTE, -30°C to 30°C, flow | 3.2E-05 | 1/°C | ASTM D696 |
| CTE, -30°C to 30°C, xflow | 4.1E-05 | 1/°C | ASTM D696 |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 177 | °C | ISO 75/Bf |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 169 | °C | ISO 75/Af |
| Relative Temp Index, Elec ⁽²⁾ | 65 | °C | UL 746B |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|-------------------|---|-----------------------------|
| Relative Temp Index, Mech w/impact ⁽²⁾ | 65 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact ⁽²⁾ | 65 | °C | UL 746B |
| PHYSICAL ⁽¹⁾ | | | |
| Density | 1.26 | g/cm ³ | ASTM D792 |
| Moisture Absorption, (23°C/50% RH/24 hrs) | 0.16 | % | ASTM D570 |
| Mold Shrinkage, flow, 24 hrs ⁽³⁾ | 0.1 | % | ASTM D955 |
| Mold Shrinkage, xflow, 24 hrs ⁽³⁾ | 0.5 | % | ASTM D955 |
| Wear Factor Washer | 14 | 10 ⁸ -10 in ⁵ -min/ft-lb-hr | ASTM D3702 Modified: Manual |
| Wear Factor Ring | 0 | 10 ⁸ -10 in ⁵ -min/ft-lb-hr | ASTM D3702 Modified: Manual |
| Dynamic COF | 0.47 | - | ASTM D3702 Modified: Manual |
| Static COF | 0.33 | - | ASTM D3702 Modified: Manual |
| Moisture Absorption (23°C / 50% RH) | 0.24 | % | ISO 62 |
| FLAME CHARACTERISTICS ⁽²⁾ | | | |
| UL Yellow Card Link | E207780-101282600 | - | - |
| UL Recognized, 94HB Flame Class Rating | 1.5 | mm | UL 94 |
| INJECTION MOLDING ⁽⁴⁾ | | | |
| Drying Temperature | 100 – 105 | °C | |
| Drying Time | 3 – 4 | Hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Melt Temperature | 260 – 280 | °C | |
| Nozzle Temperature | 250 – 270 | °C | |
| Front - Zone 3 Temperature | 260 – 280 | °C | |
| Middle - Zone 2 Temperature | 250 – 270 | °C | |
| Rear - Zone 1 Temperature | 240 – 260 | °C | |
| Hopper Temperature | 40 – 60 | °C | |
| Mold Temperature | 60 – 85 | °C | |