# LNP™ COLORCOMP™ COMPOUND D1000RF

REGION ASIA

## DESCRIPTION

LNP™ COLORCOMP™ D1000RF is an unfilled compound based on Polycarbonate resin. Added features of this grade include: Non-Halogenated, Mold Release, UL Rated HB. Good for small, intricate parts.

## TYPICAL PROPERTY VALUES

Revision 20190718

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 62 | MPa | ASTM D 638 |
| Tensile Stress, brk, Type I, 50 mm/min | 68 | MPa | ASTM D 638 |
| Tensile Strain, yld, Type I, 50 mm/min | 7 | % | ASTM D 638 |
| Tensile Strain, brk, Type I, 50 mm/min | 125 | % | ASTM D 638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 96 | MPa | ASTM D 790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2340 | MPa | ASTM D 790 |
| Hardness, Rockwell M | 70 | - | ASTM D 785 |
| Hardness, Rockwell R | 118 | - | ASTM D 785 |
| Taber Abrasion, CS-17, 1 kg | 10 | mg/1000cy | ASTM D 1044 |
| IMPACT | | | |
| Izod Impact, unnotched, 23°C | 3204 | J/m | ASTM D 4812 |
| Izod Impact, notched, 23°C | 694 | J/m | ASTM D 256 |
| Tensile Impact Strength, Type S | 546 | kJ/m² | ASTM D 1822 |
| Falling Dart Impact (D 3029), 23°C | 169 | J | ASTM D 3029 |
| Instrumented Impact Energy @ peak, 23°C | 62 | J | ASTM D 3763 |
| Izod Impact, unnotched 80*10*3 +23°C | NB | kJ/m² | ISO 180/1U |
| Izod Impact, unnotched 80*10*3 -30°C | NB | kJ/m² | ISO 180/1U |
| Izod Impact, notched 80*10*3 +23°C | 65 | kJ/m² | ISO 180/1A |
| Izod Impact, notched 80*10*3 -30°C | 11 | kJ/m² | ISO 180/1A |
| Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm | 65 | kJ/m² | ISO 179/1eA |
| Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm | 12 | kJ/m² | ISO 179/1eA |
| Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm | NB | kJ/m² | ISO 179/1eU |
| Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm | NB | kJ/m² | ISO 179/1eU |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 154 | °C | ASTM D 1525 |
| HDT, 0.45 MPa, 6.4 mm, unannealed | 137 | °C | ASTM D 648 |
| HDT, 1.82 MPa, 6.4 mm, unannealed | 129 | °C | ASTM D 648 |
| CTE, -40°C to 95°C, flow | 6.84E-05 | 1/°C | ASTM E 831 |
| Specific Heat | 1.25 | J/g-°C | ASTM C 351 |
| Thermal Conductivity | 0.25 | W/m-°C | ASTM C177 |
| PHYSICAL | | | |
| Specific Gravity | 1.2 | - | ASTM D 792 |
| Specific Volume | 0.83 | cm³/g | ASTM D 792 |
| Density | 1.19 | g/cm³ | ASTM D 792 |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| Water Absorption, 24 hours | 0.15 | % | ASTM D 570 |
| Water Absorption, equilibrium, 23C | 0.35 | % | ASTM D 570 |
| Water Absorption, equilibrium, 100°C | 0.58 | % | ASTM D 570 |
| Mold Shrinkage, flow, 3.2 mm | 0.5 – 0.7 | % | SABIC method |
| Melt Flow Rate, 300°C/1.2 kgf | 17.5 | g/10 min | ASTM D 1238 |
| OPTICAL | | | |
| Light Transmission, 2.54 mm | 88 | % | ASTM D 1003 |
| Haze, 2.54 mm | 1 | % | ASTM D 1003 |
| Refractive Index | 1.586 | - | ASTM D542 |
| ELECTRICAL | | | |
| Volume Resistivity | >1E+17 | Ohm-cm | ASTM D 257 |
| Dielectric Strength, in air, 3.2 mm | 14.9 | kV/mm | ASTM D 149 |
| Relative Permittivity, 50/60 Hz | 3.17 | - | ASTM D 150 |
| Relative Permittivity, 1 MHz | 2.96 | - | ASTM D 150 |
| Dissipation Factor, 50/60 Hz | 0.0009 | - | ASTM D 150 |
| Dissipation Factor, 1 MHz | 0.01 | - | ASTM D 150 |
| INJECTION MOLDING | | | |
| Drying Temperature | 120 | °C | |
| Drying Time | 3 – 4 | hrs | |
| Drying Time (Cumulative) | 48 | hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Melt Temperature | 280 – 305 | °C | |
| Nozzle Temperature | 275 – 300 | °C | |
| Front - Zone 3 Temperature | 280 – 305 | °C | |
| Middle - Zone 2 Temperature | 270 – 295 | °C | |
| Rear - Zone 1 Temperature | 260 – 280 | °C | |
| Mold Temperature | 70 – 95 | °C | |
| Back Pressure | 0.3 – 0.7 | MPa | |
| Screw Speed | 40 – 70 | rpm | |
| Shot to Cylinder Size | 40 – 60 | % | |
| Vent Depth | 0.025 – 0.076 | mm | |

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