

Polymer Resources NY6-GP2 General Purpose Nylon 6, Nucleated

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , Unreinforced

Material Notes:

General Purpose Nylon 6, Nucleated Process: Injection Molding Notes: All physical, mechanical and thermal testing conducted on 1/8-inch thick, un-pigmented, test samples. Nylon grades are tested dry as molded (DAM). Information provided by Polymer Resources Corporation.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Polymer-Resources-NY6-GP2-General-Purpose-Nylon-6-Nucleated.php

| Physical Properties | Metric | English | Comments |
|-----------------------|----------------------|----------------------|-----------|
| Specific Gravity | 1.13 g/cc | 1.13 g/cc | ASTM D792 |
| Linear Mold Shrinkage | 0.0080 - 0.012 cm/cm | 0.0080 - 0.012 in/in | ASTM D955 |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|------------------------------------|---------------------------------------|------------|
| Tensile Strength at Break | 89.6 MPa | 13000 psi | ASTM D638 |
| Tensile Strength, Yield | 89.6 MPa | 13000 psi | ASTM D638 |
| Flexural Strength | 108 MPa | 15700 psi | ASTM D790 |
| Flexural Modulus | 3.10 GPa | 450 ksi | ASTM D790 |
| Izod Impact, Notched | 0.534 J/cm @Temperature 22.8 °C | 1.00 ft-lb/in @Temperature 73.0 °F | ASTM D256 |
| Gardner Impact | 36.2 J | 26.7 ft-lb | ASTM D3029 |

| Thermal Properties | Metric | English | Comments |
|---|---------------------|----------------------|-----------|
| Deflection Temperature at 0.46 MPa (66 psi) | 191 °C | 375 °F | ASTM D648 |
| Deflection Temperature at 1.8 MPa (264 psi) | 73.9 °C | 165 °F | ASTM D648 |
| UL RTI, Electrical | 125 °C | 257 °F | UL 746 |
| | @Thickness 0.800 mm | @Thickness 0.0315 in | |
| | 125 °C | 257 °F | UL 746 |
| | @Thickness 1.50 mm | @Thickness 0.0591 in | |
| | 125 °C | 257 °F | UL 746 |
| @Thickness 3.00 mm | @Thickness 0.118 in | | |
| | 125 °C | 257 °F | UL 746 |
| | @Thickness 5.99 mm | @Thickness 0.236 in | |

| Thermal Properties | Metric | English | Comments |
|-----------------------------------|---------------------|----------------------|----------|
| UL RTI, Mechanical with Impact | 85.0 °C | 185 °F | UL 746 |
| | @Thickness 0.800 mm | @Thickness 0.0315 in | |
| | 85.0 °C | 185 °F | UL 746 |
| | @Thickness 1.50 mm | @Thickness 0.0591 in | |
| 85.0 °C | 85.0 °C | 185 °F | UL 746 |
| | @Thickness 3.00 mm | @Thickness 0.118 in | |
| 85.0 °C | 85.0 °C | 185 °F | UL 746 |
| | @Thickness 5.99 mm | @Thickness 0.236 in | |
| UL RTI, Mechanical without Impact | 65.0 °C | 149 °F | UL 746 |
| | @Thickness 0.800 mm | @Thickness 0.0315 in | |
| | 75.0 °C | 167 °F | UL 746 |
| | @Thickness 1.50 mm | @Thickness 0.0591 in | |
| 75.0 °C | 75.0 °C | 167 °F | UL 746 |
| | @Thickness 3.00 mm | @Thickness 0.118 in | |
| 75.0 °C | 75.0 °C | 167 °F | UL 746 |
| | @Thickness 5.99 mm | @Thickness 0.236 in | |
| Flammability, UL94 | V-2 | V-2 | |
| | @Thickness 1.50 mm | @Thickness 0.0591 in | |
| V-2 | V-2 | V-2 | |
| | @Thickness 3.00 mm | @Thickness 0.118 in | |

| Electrical Properties | Metric | English | Comments |
|----------------------------|---------------------|----------------------|-----------|
| Volume Resistivity | 1.00e+14 ohm-cm | 1.00e+14 ohm-cm | ASTM D257 |
| Dielectric Strength | 29.9 kV/mm | 760 kV/in | ASTM D149 |
| Comparative Tracking Index | >= 600 V | >= 600 V | UL 746 |
| Hot Wire Ignition, HWI | 7.0 - 15 sec | 7.0 - 15 sec | UL 746 |
| | @Thickness 0.800 mm | @Thickness 0.0315 in | |
| 7.0 - 15 sec | 7.0 - 15 sec | 7.0 - 15 sec | UL 746 |
| | @Thickness 1.50 mm | @Thickness 0.0591 in | |
| 15 - 30 sec | 15 - 30 sec | 15 - 30 sec | UL 746 |
| | @Thickness 3.00 mm | @Thickness 0.118 in | |

| Electrical Properties | Metric | English | Comments |
|--------------------------------------|------------------------------------|-------------------------------------|----------|
| | @Thickness 5.99 mm | @Thickness 0.236 in | UL 746 |
| High Amp Arc Ignition, HAI | >= 120 arcs @Thickness 0.800 mm | >= 120 arcs @Thickness 0.0315 in | UL 746 |
| | >= 120 arcs @Thickness 1.50 mm | >= 120 arcs @Thickness 0.0591 in | UL 746 |
| | >= 120 arcs @Thickness 3.00 mm | >= 120 arcs @Thickness 0.118 in | UL 746 |
| | >= 120 arcs @Thickness 5.99 mm | >= 120 arcs @Thickness 0.236 in | UL 746 |
| High Voltage Arc-Tracking Rate, HVTR | 10.0 - 25.4 mm/min | 0.394 - 1.00 in/min | UL 746 |

| Processing Properties | Metric | English | Comments |
|---------------------------|------------------|------------------|----------|
| Rear Barrel Temperature | 221 - 246 °C | 430 - 475 °F | |
| Middle Barrel Temperature | 238 - 254 °C | 460 - 490 °F | |
| Front Barrel Temperature | 243 - 260 °C | 470 - 500 °F | |
| Melt Temperature | 238 - 279 °C | 460 - 535 °F | |
| Mold Temperature | 79.4 - 93.3 °C | 175 - 200 °F | |
| Drying Temperature | 73.9 - 85.0 °C | 165 - 185 °F | |
| Dry Time | 3.00 - 4.00 hour | 3.00 - 4.00 hour | |

| Descriptive Properties | Value | Comments |
|------------------------|--------|----------|
| Vent | 0.0003 | |

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