

Solvay Specialty Polymers Omnix® 9050 Polyamide, High Performance (HPPA), 50% Glass Fiber

Category : Polymer , Thermoplastic , Nylon

Material Notes:

Omnix® 9050 is a 50% glass-fiber reinforced high-performance polyamide. It is hot-water moldable and intended for use in components requiring superior mechanical properties even after moisture absorption. Omnix® 9050 is characterized by high stiffness and strength, very good impact properties, good dimensional stability and high flow properties. This material is an economical alternative to die-cast alloys for application in automotive, electrical appliance and mechanical equipment. It processes readily using conventional injection molding machines and methods. Water-cooled molds are suitable for use with this grade. Features: Fast Molding Cycle; Good Dimensional Stability; Good Impact Resistance; Good Surface Finish; High Flow; High Stiffness; High Strength; Hot Water Moldability; Paintable Uses: Automotive Applications; Electrical/Electronic Applications; Machinery Maintenance/Repair Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Omnix-9050-Polyamide-High-Performance-HPPA-50-Glass-Fiber.php

| Physical Properties | Metric | English | Comments |
|-----------------------------------|---------------------------|---------------------------|-------------|
| Density | 1.60 g/cc | 0.0578 lb/in ³ | ASTM D792 |
| Filler Content | 50 % | 50 % | Glass Fiber |
| Water Absorption | 0.27 % @Time 86400 sec | 0.27 % @Time 24.0 hour | ISO 62 |
| Linear Mold Shrinkage, Flow | 0.0020 cm/cm | 0.0020 in/in | ISO 294-4 |
| Linear Mold Shrinkage, Transverse | 0.0050 cm/cm | 0.0050 in/in | ISO 294-4 |

| Mechanical Properties | Metric | English | Comments |
|------------------------------|------------------------|----------------------------|--------------------------|
| Tensile Strength, Yield | 235 MPa | 34100 psi | ISO 527-2 |
| Elongation at Break | 2.1 % | 2.1 % | ISO 527-2 |
| Tensile Modulus | 17.0 GPa | 2470 ksi | ISO 527-2 |
| Flexural Strength | 340 MPa | 49300 psi | ISO 178 |
| Flexural Modulus | 15.0 GPa | 2180 ksi | ISO 178 |
| Izod Impact, Notched (ISO) | 13.0 kJ/m ² | 6.19 ft-lb/in ² | Type 1, Notch A; ISO 180 |
| Izod Impact, Unnotched (ISO) | 75.0 kJ/m ² | 35.7 ft-lb/in ² | ISO 180 |

| Thermal Properties | Metric | English | Comments |
|--------------------|--------|---------|----------|
| | | | |

| Melting Point Thermal Properties | 260 Â°C Metric | 500 Â°F English | ISO 11357-3 Comments |
|---|-------------------|--------------------|-------------------------|
| Deflection Temperature at 1.8 MPa (264 psi) | 248 Â°C | 478 Â°F | Unannealed; ISO 75-2/A |
| Flammability, UL94 | HB | HB | |

| Processing Properties | Metric | English | Comments |
|--------------------------|-------------------------------------|-----------------------------------|----------|
| Rear Barrel Temperature | 250 Â°C | 482 Â°F | |
| Front Barrel Temperature | 285 Â°C | 545 Â°F | |
| Melt Temperature | 275 - 290 Â°C | 527 - 554 Â°F | |
| Mold Temperature | 80.0 - 120 Â°C | 176 - 248 Â°F | |
| Drying Temperature | 80.0 Â°C @Time 14400 - 43200 sec | 176 Â°F @Time 4.00 - 12.0 hour | |

| Descriptive Properties | Value | Comments |
|------------------------|--|-----------|
| Availability | Asia Pacific | |
| | Europe | |
| | North America | |
| Color | Black; Natural | |
| Form | Pellets | |
| Part Marking Code | >PAMXD6/66-GF50< | ISO 11469 |
| Processing Technique | Injection Molding; Water-Heated Mold Injection Molding | |
| RoHS Compliance | RoHS Compliant | |

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