

DuPont™ Minlon®

mineral reinforced nylon resin

Minlon® 10B40 BK061

Mineral Reinforced PA Resin

Minlon® 10B40 BK061 is a 40% mineral reinforced black polyamide 66 resin.

| Property | Test Method | Units | Value | |
|----------------------------------|---------------------|-------------------|---------------|------------|
| | | | DAM | 50%RH |
| Identification | | | | |
| Resin Identification | ISO 1043-1/-2/-3/-4 | | PA66-MD40 | |
| Part Marking Code | ISO 11469 | | >PA66-MD40< | |
| Mechanical | | | | |
| Stress at Break | ISO 527-1/-2 | MPa (kpsi) | 90 (13.1) | 58 (8.4) |
| Tensile Strength | ASTM D 638 | MPa (kpsi) | 87 (12.6) | |
| Strain at Break | ISO 527-1/-2 | % | 2.5 | 8 |
| Elongation at Break | ASTM D 638 | % | 2.5 | |
| Tensile Modulus | ISO 527-1/-2 | MPa (kpsi) | 9000 (1300) | 5400 (785) |
| Flexural Modulus | ISO 178 | MPa (kpsi) | 8200 (1190) | |
| Flexural Modulus | ASTM D 790 | MPa (kpsi) | 8620 (1250) | |
| Flexural Strength | ASTM D 790 | MPa (kpsi) | 148 (21.5) | |
| Notched Izod Impact Strength | ISO 180/1A | kJ/m ² | -40°C (-40°F) | 2.5 |
| | | | 23°C (73°F) | 3.5 |
| Izod Impact | ASTM D 256 | J/m (ft lb/in) | 32 (0.6) | |
| Unnotched Izod Impact Strength | ISO 180/1U | kJ/m ² | 22 | |
| Unnotched Impact | ASTM D 4812 | J/m (ft lb/in) | 320 (6) | |
| Notched Charpy Impact Strength | ISO 179/1eA | kJ/m ² | -40°C (-40°F) | 2 |
| | | | 23°C (73°F) | 2.5 |
| Unnotched Charpy Impact Strength | ISO 179/1eU | kJ/m ² | 25 | |

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.
 ISO Mechanical properties measured at 4.0mm, ISO Electrical properties measured at 2.0mm, and all ASTM properties measured at 3.2mm.
 Test temperatures are 23°C unless otherwise stated.

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|---|----------------|---------------|---|-------|
| | | | DAM | 50%RH |
| Thermal | | | | |
| Deflection Temperature 1.80MPa | ISO 75-1/-2 | °C (°F) | 200 (392) | |
| Heat Deflection Temperature 0.45MPa (66psi) 1.8MPa (264psi) | ASTM D 648 | °C (°F) | 245 (473) 210 (410) | |
| Melting Temperature 10°C/min | ISO 11357-1/-3 | °C (°F) | 263 (505) | |
| Melting Point | ASTM D 3418 | °C (°F) | 263 (505) | |
| CLTE, Normal -40 - 23°C (-40 - 73°F) 23 - 55°C (73 - 130°F) 55 - 160°C (130 - 320°F) | ISO 11359-1/-2 | E-4/C (E-4/F) | 0.53 (0.29) 0.66 (0.36) 1.1 (0.61) | |
| CLTE, Parallel -40 - 23°C (-40 - 73°F) 23 - 55°C (73 - 130°F) 55 - 160°C (130 - 320°F) | ISO 11359-1/-2 | E-4/C (E-4/F) | 0.33 (0.18) 0.36 (0.20) 0.39 (0.22) | |
| Electrical | | | | |
| CTI 3.0mm | UL 746A | V | >600 | |
| Flammability | | | | |
| Flammability Classification 1.5mm 3.0mm | UL94 | | HB HB | |
| High Amperage Arc Ignition Resistance 0.75mm 1.5mm 3.0mm | UL 746A | arcs | >200 >200 >200 | |

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|--------------------------|-------------|--|-------------|-------|
| | | | DAM | 50%RH |
| Flammability | | | | |
| Hot Wire Ignition | UL 746A | s | | |
| 0.75mm | | | 8 | |
| 1.5mm | | | 8 | |
| 3.0mm | | | 10 | |
| Temperature Index | | | | |
| RTI, Electrical | UL 746B | °C | | |
| 0.71mm | | | 105 | |
| 1.5mm | | | 120 | |
| 3.0mm | | | 120 | |
| RTI, Impact | UL 746B | °C | | |
| 0.71mm | | | 65 | |
| 1.5mm | | | 105 | |
| 3.0mm | | | 115 | |
| RTI, Strength | UL 746B | °C | | |
| 0.71mm | | | 65 | |
| 1.5mm | | | 115 | |
| 3.0mm | | | 115 | |
| Other | | | | |
| Specific Gravity | ASTM D 792 | | 1.51 | |
| Density | ISO 1183 | kg/m ³ (g/cm ³) | 1510 (1.51) | |
| Molding Shrinkage | ISO 294-4 | % | | |
| Normal, 2.0mm | | | 0.9 | |
| Parallel, 2.0mm | | | 0.4 | |

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Product Information

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|---------------------------------|-------------|---------|-------------------|-------|
| | | | DAM | 50%RH |
| Mold Shrinkage | | % | | |
| Flow, 1.6mm (0.063in) | | | 0.4 | |
| Flow, 3.2mm (0.126in) | | | 0.4 | |
| Flow, 6.4mm (0.25in) | | | 0.6 | |
| Transverse, 1.6mm (0.063in) | | | 0.9 | |
| Transverse, 3.2mm (0.126in) | | | 0.9 | |
| Transverse, 6.4mm (0.25in) | | | 1.1 | |
| Processing | | | | |
| Melt Temperature Range | | °C (°F) | 285-305 (545-580) | |
| Melt Temperature Optimum | | °C (°F) | 295 (560) | |
| Mold Temperature Range | | °C (°F) | 70-120 (160-250) | |
| Mold Temperature Optimum | | °C (°F) | 100 (210) | |
| Drying Time, Dehumidified Dryer | | h | 2-4 | |
| Drying Temperature | | °C (°F) | 80 (175) | |
| Processing Moisture Content | | % | <0.20 | |

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