

DuPont Performance Polymers Minlon® 10B40HS1 BK061 Nylon 66 (Unverified Data**)

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 40% Mineral Filled

Material Notes:

Minlon® 10B40HS1 BK061 is a 40% mineral reinforced, heat stabilized, black polyamide 66 resin for injection molding. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Minlon-10B40HS1-BK061-Nylon-66-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.51 g/cc	1.51 g/cc	DAM; ASTM D792
Density	1.51 g/cc	0.0546 lb/in ³	DAM; ISO 1183
Filler Content	40 %	40 %	DAM
Linear Mold Shrinkage	0.0040 cm/cm	0.0040 in/in	Flow; DAM
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	0.0040 cm/cm	0.0040 in/in	Flow; DAM
	@Thickness 3.20 mm	@Thickness 0.126 in	
	0.0060 cm/cm	0.0060 in/in	Flow; DAM
	@Thickness 6.40 mm	@Thickness 0.252 in	
	0.0090 cm/cm	0.0090 in/in	Transverse; DAM
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	0.0090 cm/cm	0.0090 in/in	Transverse; DAM
	@Thickness 3.20 mm	@Thickness 0.126 in	
	0.011 cm/cm	0.011 in/in	Transverse; DAM
	@Thickness 6.40 mm	@Thickness 0.252 in	
Linear Mold Shrinkage, Flow	0.0040 cm/cm	0.0040 in/in	DAM; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.0090 cm/cm	0.0090 in/in	DAM; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	95.0 MPa	13800 psi	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength	47.0 MPa	12500 psi	DAM; ASTM D638
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	2.5 %	2.5 %	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	2.5 %	2.5 %	DAM; ASTM D638
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus	10.0 GPa	1450 ksi	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Strength	148 MPa	21500 psi	DAM; ASTM D790
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Modulus	8.62 GPa	1250 ksi	DAM; ASTM D790
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	9.50 GPa	1380 ksi	DAM; ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched	0.320 J/cm	0.599 ft-lb/in	DAM; ASTM D256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched	3.20 J/cm	5.99 ft-lb/in	DAM; ASTM D4812
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	2.50 kJ/m²	1.19 ft-lb/in²	DAM; ISO 180/1A
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	3.50 kJ/m²	1.67 ft-lb/in²	DAM; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.200 J/cm²	0.952 ft-lb/in²	DAM; ISO 179/1eA
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	0.300 J/cm²	1.43 ft-lb/in²	DAM; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	500 µm/m-°C	278 µin/in-°F	DAM; ASTM E 831
	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	
	500 µm/m-°C	278 µin/in-°F	

Thermal Properties	Metric	English	Comments
	55.0 °C	131 °F	DAM; ASTM E 831
	500 µm/m-°C	278 µin/in-°F	DAM; ASTM E 831
	@Temperature 55.0 - 160 °C	@Temperature 131 - 320 °F	
	500 µm/m-°C	278 µin/in-°F	DAM; ISO 11359-1/-2
	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	
	500 µm/m-°C	278 µin/in-°F	DAM; ISO 11359-1/-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
	500 µm/m-°C	278 µin/in-°F	DAM; ISO 11359-1/-2
	@Temperature 55.0 - 160 °C	@Temperature 131 - 320 °F	
CTE, linear, Transverse to Flow	53.0 µm/m-°C	29.4 µin/in-°F	DAM; ISO 11359-1/-2
	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	
	53.0 µm/m-°C	29.4 µin/in-°F	DAM; ASTM E 831
	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	
	66.0 µm/m-°C	36.7 µin/in-°F	DAM; ISO 11359-1/-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
	66.0 µm/m-°C	36.7 µin/in-°F	DAM; ASTM E 831
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
	110 µm/m-°C	61.1 µin/in-°F	DAM; ISO 11359-1/-2
	@Temperature 55.0 - 160 °C	@Temperature 131 - 320 °F	
	110 µm/m-°C	61.1 µin/in-°F	DAM; ASTM E 831
	@Temperature 55.0 - 160 °C	@Temperature 131 - 320 °F	
Melting Point	263 °C	505 °F	10°C/min; DAM; ISO 11357-1/-3
	263 °C	505 °F	DAM; ASTM D3418
Deflection Temperature at 1.8 MPa (264 psi)	205 °C	401 °F	DAM; ISO 75-1/-2
	210 °C	410 °F	DAM; ASTM D648

Thermal Properties Flammability, UL 94	Metric	English	Comments
	@Thickness 3.00 mm	@Thickness 0.118 in	
	HB	HB	DAM; IEC 60695-11-10
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	DAM; IEC 60695-11-10
	@Thickness 0.710 mm	@Thickness 0.0280 in	

Processing Properties	Metric	English	Comments
Melt Temperature	295 °C	563 °F	DAM; Optimum
	285 - 305 °C	545 - 581 °F	DAM
Mold Temperature	70.0 - 120 °C	158 - 248 °F	DAM
	100 °C	212 °F	DAM; optimum
Drying Temperature	80.0 °C	176 °F	DAM
Dry Time	2.00 - 4.00 hour	2.00 - 4.00 hour	DAM
Moisture Content	<= 0.20 %	<= 0.20 %	DAM

Descriptive Properties	Value	Comments
Additive	Heat Stabilizer	DAM
Appearance	Black Color	DAM
Drying Recommended	Yes, if moisture content of resin exceeds recommended level	DAM
Features	Warpage, Low	DAM
Filler	Mineral filler	DAM
Forms	Pellets	DAM
Generic	Nylon 66	DAM
Heat Stabilized	Yes	DAM
Material Status	Current	DAM
Part Marking Code	>PA66-MD40<	ISO 11469; DAM
Polymer Family	Polyamide	DAM
Polymer Type	PA66	DAM
Processing Method	Injection Molding	DAM

Descriptive Properties Product Category	Value Low Warp Resins	Comments DAM
	Mineral Reinforced Resins	DAM
Resin Identification	PA66-MD40	ISO 1043; DAM
RoHS Compliance	Contact Manufacturer	DAM
Ultrasonic Weldable	Yes	DAM
Uses	Appliance Components	DAM
	Automotive Applications	DAM
	Gears	DAM
	Industrial Applications	DAM
	Parts, Engineering	DAM

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