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

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Property	Test Method	Units	Value	
			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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Property	Test Method	Units	Value	
			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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