

DuPont™ Minlon®

mineral reinforced nylon resin

Minlon® 22C NC010

Minlon® 22C NC010 is a 38% mineral/glass reinforced, heat stabilized polyamide 66 resin for injection molding.

Property	Test Method	Units	Value	
			DAM	50%RH
Identification				
Resin Identification	ISO 1043		PA66-(MD+GF)38	
Part Marking Code	ISO 11469		>PA66-(MD+GF)38<	
Mechanical				
Stress at Break	ISO 527	MPa (kpsi)	130 (18.9)	82 (11.9)
Strain at Break	ISO 527	%	3.5	10
Tensile Modulus	ISO 527	MPa (kpsi)	7500 (1090)	5000 (725)
Flexural Modulus	ISO 178	MPa (kpsi)	6500 (940)	5000 (725)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m ²		
-40°C (-40°F)			3	3
-30°C (-22°F)			3	4
23°C (73°F)			4	6
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m ²		
-30°C (-22°F)			40	35
23°C (73°F)			50	45

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	ISO 75f	°C (°F)		
0.45MPa			255 (491)	
1.80MPa			230 (446)	
Melting Temperature	ISO 11357-1/-3	°C (°F)		
10°C/min			263 (505)	
CLTE, Normal				
-40 - 23°C (-40 - 73°F)	ISO 11359-1/-2	E-4/C (E-4/F)	0.53 (0.29)	
23 - 55°C (73 - 130°F)			0.62 (0.33)	
55 - 160°C (130 - 320°F)			1.0 (0.56)	
CLTE, Parallel	ISO 11359-1/-2	E-4/C (E-4/F)		
-40 - 23°C (-40 - 73°F)			0.39 (0.22)	
23 - 55°C (73 - 130°F)			0.41 (0.23)	
55 - 160°C (130 - 320°F)			0.36 (0.20)	
Electrical				
Relative Permittivity	IEC 60250			
1E2 Hz			4	7
1E6 Hz			4	4
Volume Resistivity	IEC 60093	ohm m	1E11	1E7
Dissipation Factor	IEC 60250	E-4		
1E2 Hz			100	200
1E6 Hz			100	500
Electric Strength	IEC 60243-1	kV/mm (V/mil)		
2.0mm	UL 746A	V	20 (510)	18 (460)
CTI				
3.0mm			475	

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Property	Test Method	Units	Value	
			DAM	50%RH
Flammability				
Flammability Classification	IEC 60695-11-10			
0.81mm			HB	
Flammability Classification	UL94			
0.81mm			HB	
Oxygen Index	ISO 4589-1/-2	%	24	
High Amperage Arc Ignition Resistance	UL 746A	arcs		
1.5mm			>200	
3.0mm			>200	
Hot Wire Ignition	UL 746A	s		
1.5mm			117	
3.0mm			120	
Temperature Index				
RTI, Electrical	UL 746B	°C		
0.81mm			65	
RTI, Impact	UL 746B	°C		
0.81mm			65	
RTI, Strength	UL 746B	°C		
0.81mm			65	
Other				
Density	ISO 1183	kg/m ³ (g/cm ³)	1450 (1.45)	
Water Absorption	ISO 62, Similar to	%		
Equilibrium 50%RH			1.4	
Immersion 24h, 2.0mm			1.0	
Saturation, immersed			5.4	
Molding Shrinkage	ISO 294-4	%		
Normal, 2.0mm			0.9	
Parallel, 2.0mm			0.7	

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			DAM	50%RH
Other				
Mold Shrinkage		%		
Flow, 1.6mm (0.062in)			0.6	
Flow, 3.2mm (0.126in)			0.7	
Flow, 6.4mm (0.25in)			0.8	
Transverse, 1.6mm (0.062in)			0.8	
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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