

DuPont™ Minlon®

mineral reinforced nylon resin

Minlon® 12T NC010

Minlon® 12T NC010 is a 36% mineral reinforced, toughened, heat stabilized polyamide 66 resin for injection molding.

Property	Test Method	Units	Value	
			DAM	50%RH
Identification				
Resin Identification	ISO 1043		PA66-IMD36	
Part Marking Code	ISO 11469		>PA66-IMD36<	
Mechanical				
Stress at Break	ISO 527	MPa (kpsi)	80 (11.6)	58 (8.4)
Strain at Break	ISO 527	%	18	40
Tensile Modulus	ISO 527	MPa (kpsi)	4900 (710)	2000 (290)
Poisson's Ratio			0.40	
Flexural Modulus	ISO 178	MPa (kpsi)	4500 (650)	1800 (260)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m ²		
-40°C (-40°F)			4	3
-30°C (-22°F)			5	4
23°C (73°F)			9	15
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m ²		
-30°C (-22°F)			90	120 (12)
23°C (73°F)			210	330

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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Thermal				
Deflection Temperature 0.45MPa	ISO 75f	°C (°F)	205 (401)	
1.80MPa			80 (176)	
Melting Temperature 10°C/min	ISO 11357-1/-3	°C (°F)	256 (493)	
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)			0.65 (0.36)	
55 - 160°C (130 - 320°F)			0.98 (0.54)	
CLTE, Parallel -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)			0.64 (0.36)	
55 - 160°C (130 - 320°F)			0.80 (0.44)	
Electrical				
Relative Permittivity 1E2 Hz	IEC 60250		4	
1E6 Hz			3.8	
Volume Resistivity	IEC 60093	ohm m	1E11	
Dissipation Factor 1E2 Hz	IEC 60250	E-4	100	
1E6 Hz			100	
Electric Strength 2.0mm	IEC 60243-1	kV/mm (V/mil)	24 (610)	
CTI 3.0mm	UL 746A	V	400	

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Flammability				
Flammability Classification 0.81mm	IEC 60695-11-10		HB	
Flammability Classification 0.81mm	UL94		HB	
Oxygen Index	ISO 4589-1/-2	%	25	
High Amperage Arc Ignition Resistance 0.81mm	UL 746A	arcs	120	
1.5mm			120	
3.0mm			120	
Hot Wire Ignition 0.81mm	UL 746A	s	7	
1.5mm			15	
3.0mm			15	
Temperature Index				
RTI, Electrical 0.81mm	UL 746B	°C	65	
RTI, Impact 0.81mm	UL 746B	°C	65	
RTI, Strength 0.81mm	UL 746B	°C	65	
Other				
Density	ISO 1183	kg/m ³ (g/cm ³)	1410 (1.41)	
Water Absorption Equilibrium 50%RH	ISO 62, Similar to	%	1.7	
Immersion 24h, 2.0mm			1.2	
Saturation, immersed			6.2	

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			DAM	50%RH
Other				
Molding Shrinkage	ISO 294-4	%		
Normal, 2.0mm			0.9	
Parallel, 2.0mm			0.9	
Mold Shrinkage				
Flow, 1.6mm (0.063in)			1.1	
Flow, 3.2mm (0.126in)			1.0	
Flow, 6.4mm (0.25in)			1.4	
Transverse, 1.6mm (0.063in)			1.1	
Transverse, 3.2mm (0.126in)			1.0	
Transverse, 6.4mm (0.25in)	1.4			
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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