Product Information

DuPont[™] Minlon[®]

mineral reinforced nylon resin

Minlon® 73M40 NC010

Minlon® 73M40 NC010 is a 40% mineral reinforced, heat stabilized polyamide 6 resin for injection molding. It has

isotropic properties and low warpage

Property	Test Method	TI:4	Value	
		Units	DAM	50%RH
Identification				
Resin Identification	ISO 1043		PA6-MD40	
Part Marking Code	ISO 11469		>PA6-MD40<	
Mechanical				
Stress at Break	ISO 527	MPa (kpsi)	87 (12.6)	59 (8.6)
Strain at Break	ISO 527	%	10	25
Tensile Modulus	ISO 527	MPa (kpsi)	6000 (870)	2200 (320)
Flexural Modulus	ISO 178	MPa (kpsi)	5900 (860)	
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m^2		
-30°C (-22°F)			4	5
23°C (73°F)			5.5	8
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m^2		
-30°C (-22°F)			95	95
23°C (73°F)			130	NB

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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For other medical applications see "DuPont Medical Caution Statement", H-50102.



Product Information

Minlon® 73M40 NC010

Dam	Duomouter	Test Method	Units	Value		
Deflection Temperature	Property	Test Method	Units	DAM	50%RH	
0.45MPa	Thermal					
1.80MPa	Deflection Temperature	ISO 75f	°C (°F)			
Melting Temperature ISO 11357-1/-3 °C (°F) 221 (430) 10°C/min ISO 11359-1/-2 E-4/C (E-4/F) 221 (430) CLTE, Normal ISO 11359-1/-2 E-4/C (E-4/F) 0.75 (0.42) 23 - 55°C (73 - 130°F) ISO 11359-1/-2 E-4/C (E-4/F) 0.65 (0.36) Vicat Softening Temperature ISO 306 °C (°F) 210 (410) Flammability Flammability Classification IEC 60695-11-10 0.85mm HB Flammability Classification UL.94 HB HB Temperature Index RTI, Electrical UL 746B °C 65 65 RTI, Impact UL 746B °C 65 65 RTI, Strength UL 746B °C 65 65 Other Density ISO 1183 kg/m³ (g/cm³) 1450 (1.45) Water Absorption ISO 62, Similar to 6 1.8 Saturation, immersed 5.4 6 Molding Shrinkage ISO 294-4 % Normal, 2.0mm 0.8 </td <td>0.45MPa</td> <td></td> <td></td> <td>196 (385)</td> <td></td>	0.45MPa			196 (385)		
10°C/min	1.80MPa			110 (230)		
CLTE, Normal ISO 11359-1/-2 E-4/C (E-4/F) 0.75 (0.42)	Melting Temperature	ISO 11357-1/-3	°C (°F)			
23 - 55°C (73 - 130°F) ISO 11359-1/-2 E-4/C (E-4/F)	10°C/min			221 (430)		
CLTE, Parallel	CLTE, Normal	ISO 11359-1/-2	E-4/C (E-4/F)			
23 - 55°C (73 - 130°F) Vicat Softening Temperature ISO 306 °C (°F) 210 (410)	23 - 55°C (73 - 130°F)			0.75 (0.42)		
Vicat Softening Temperature 50N ISO 306 °C (°F) 210 (410) Flammability Flammability Classification 0.85mm IEC 60695-11-10 IEC 60695-11-10 </td <td>CLTE, Parallel</td> <td>ISO 11359-1/-2</td> <td>E-4/C (E-4/F)</td> <td></td> <td></td>	CLTE, Parallel	ISO 11359-1/-2	E-4/C (E-4/F)			
50N 210 (410) Flammability IEC 60695-11-10 0.85mm HB Flammability Classification UL94 0.85mm HB Temperature Index RTI, Electrical UL 746B °C 0.85mm 65 RTI, Impact UL 746B °C 0.85mm 65 RTI, Strength UL 746B °C 0.85mm 65 Other 65 Density ISO 1183 kg/m³ (g/cm³) 1450 (1.45) Water Absorption ISO 62, Similar to % Equilibrium 50%RH 1.8 5.4 Molding Shrinkage ISO 294-4 % Normal, 2.0mm 0.8	23 - 55°C (73 - 130°F)			0.65 (0.36)		
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0.85mm HB Flammability Classification UL94 0.85mm HB Temperature Index RTI, Electrical UL 746B °C 0.85mm 65 RTI, Impact UL 746B °C 0.85mm 65 RTI, Strength UL 746B °C 0.85mm 65 Other 65 Density ISO 1183 kg/m³ (g/cm³) 1450 (1.45) Water Absorption ISO 62, Similar to % Equilibrium 50%RH 1.8 5.4 Molding Shrinkage ISO 294-4 % Normal, 2.0mm 0.8	Flammability					
Flammability Classification	Flammability Classification	IEC 60695-11-10				
O.85mm HB Temperature Index UL 746B °C RTI, Electrical UL 746B °C 0.85mm 65 65 RTI, Impact UL 746B °C 0.85mm 65 65 RTI, Strength UL 746B °C 0.85mm 65 65 Other 65 65 Density ISO 1183 kg/m³ (g/cm³) 1450 (1.45) Water Absorption ISO 62, Similar to % 1.8 Saturation, immersed 5.4 5.4 Molding Shrinkage ISO 294-4 % Normal, 2.0mm 0.8				НВ		
Temperature Index UL 746B °C RTI, Electrical UL 746B °C 0.85mm 65 RTI, Impact UL 746B °C 0.85mm 65 RTI, Strength UL 746B °C 0.85mm 65 Other 65 Density ISO 1183 kg/m³ (g/cm³) 1450 (1.45) Water Absorption ISO 62, Similar to % Equilibrium 50%RH 1.8 Saturation, immersed 5.4 Molding Shrinkage ISO 294-4 % Normal, 2.0mm 0.8	Flammability Classification	UL94				
RTI, Electrical UL 746B °C 0.85mm 65 RTI, Impact UL 746B °C 0.85mm 65 RTI, Strength UL 746B °C 0.85mm 65 Other 65 Density ISO 1183 kg/m³ (g/cm³) 1450 (1.45) Water Absorption ISO 62, Similar to % Equilibrium 50%RH 1.8 5.4 Molding Shrinkage ISO 294-4 % Normal, 2.0mm 0.8	0.85mm			НВ		
0.85mm UL 746B °C 0.85mm 65 RTI, Strength UL 746B °C 0.85mm 65 Other Density ISO 1183 kg/m³ (g/cm³) 1450 (1.45) Water Absorption ISO 62, Similar to % Equilibrium 50%RH 1.8 Saturation, immersed 5.4 Molding Shrinkage ISO 294-4 % Normal, 2.0mm 0.8	Temperature Index					
RTI, Impact UL 746B °C 0.85mm 65 RTI, Strength UL 746B °C 0.85mm 65 Other 65 Density ISO 1183 kg/m³ (g/cm³) 1450 (1.45) Water Absorption ISO 62, Similar to % Equilibrium 50%RH 1.8 5.4 Saturation, immersed 5.4 5.4 Molding Shrinkage ISO 294-4 % 0.8	RTI, Electrical	UL 746B	°C			
0.85mm UL 746B °C RTI, Strength UL 746B °C 0.85mm 65 Other ISO 1183 kg/m³ (g/cm³) 1450 (1.45) Water Absorption ISO 62, Similar to % Equilibrium 50%RH 1.8 Saturation, immersed 5.4 Molding Shrinkage ISO 294-4 % Normal, 2.0mm 0.8	0.85mm			65		
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Other ISO 1183 kg/m³ (g/cm³) 1450 (1.45) Water Absorption ISO 62, Similar to % Equilibrium 50%RH 1.8 Saturation, immersed 5.4 Molding Shrinkage ISO 294-4 % Normal, 2.0mm 0.8				65		
Other ISO 1183 kg/m³ (g/cm³) 1450 (1.45) Water Absorption ISO 62, Similar to % Equilibrium 50%RH 1.8 Saturation, immersed 5.4 Molding Shrinkage ISO 294-4 % Normal, 2.0mm 0.8	RTI, Strength	UL 746B	°C			
Density ISO 1183 kg/m³ (g/cm³) 1450 (1.45) Water Absorption ISO 62, Similar to Equilibrium 50%RH Saturation, immersed Shrinkage ISO 294-4 % Normal, 2.0mm ISO 1183 kg/m³ (g/cm³) 1450 (1.45) 1.8 5.4 0.8	•			65		
Water Absorption Equilibrium 50%RH Saturation, immersed Molding Shrinkage Normal, 2.0mm ISO 62, Similar to 1.8 5.4 ISO 294-4 % 0.8						
Water Absorption Equilibrium 50%RH Saturation, immersed Molding Shrinkage Normal, 2.0mm ISO 62, Similar to 1.8 5.4 ISO 294-4 % 0.8	Density	ISO 1183	$kg/m^3 (g/cm^3)$	1450 (1.45)		
Equilibrium 50%RH Saturation, immersed Molding Shrinkage Normal, 2.0mm 1.8 5.4 Molding Shrinkage ISO 294-4 % 0.8	·	ISO 62, Similar to		, ,		
Saturation, immersed Molding Shrinkage Normal, 2.0mm 5.4 5.4 0.8	•			1.8		
Molding Shrinkage ISO 294-4 % Normal, 2.0mm 0.8	_			5.4		
Normal, 2.0mm 0.8	Molding Shrinkage	ISO 294-4	%			
				0.8		
	Parallel, 2.0mm					

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Property	Test Method	Units	Value	
			DAM	50%RH
Processing				
Melt Temperature Range		°C (°F)	260-280 (500-535)	
Melt Temperature Optimum		°C (°F)	270 (520)	
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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