Product Information

Zytel®

nylon resin

Zytel® 8018 NC010

Glass Reinforced Toughened Nylon Resin

Zytel® 8018 NC010 is a 14% glass reinforced toughened nylon 66 resin.

Property	Test Method	Units	Value	
			DAM	50%RH
Mechanical				
Tensile Strength	ASTM D 638	MPa (kpsi)	90 (12.9)	60 (8.6)
Stress at Break	ISO 527-1/-2	MPa (kpsi)	85 (12.3)	58 (8.4)
Elongation at Break	ASTM D 638	%	6	14
Strain at Break	ISO 527-1/-2	%	9	14
Tensile Modulus	ISO 527-1/-2	MPa (kpsi)	4200 (610)	
Flexural Modulus	ASTM D 790	MPa (kpsi)	3660 (530)	2200 (320)
Flexural Modulus	ISO 178	MPa (kpsi)	3600 (520)	2000 (290)
Izod Impact	ASTM D 256	J/m (ft lb/in)	140 (2.6)	215 (4.0)
Notched Izod Impact	ISO 180/1A	kJ/m^2		
-40°C (-40°F)			7	5
-30°C (-22°F)			10	5
23°C (73°F)			13	18
Unnotched Izod Impact	ISO 180/1U	kJ/m^2		
-30°C (-22°F)			90	70
23°C (73°F)			90	100
Unnotched Impact	ASTM D 4812	J/m (ft lb/in)	960 (18)	1065 (20)
Notched Charpy Impact	ISO 179/1eA	kJ/m^2		
-40°C (-40°F)			4	4
-30°C (-22°F)			6	6
23°C (73°F)			12	18
Unnotched Charpy Impact	ISO 179/1eU	kJ/m^2		
-30°C (-22°F)			80	75
23°C (73°F)			80	100

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.

000717/000814

Start with DuPont Engineering Polymers - www.dupont.com/enggpolymers

Zytel® 8018 NC010

Property	Test Method	Units	Value	
			DAM	50%RH
Thermal				
Heat Deflection Temperature	ASTM D 648	°C (°F)		
0.45MPa (66psi)			250 (482)	
1.8MPa (264psi)			220 (428)	
Deflection Temperature	ISO 75-1/-2	°C (°F)		
0.45MPa			246 (475)	
1.80MPa			195 (383)	
CLTE, Parallel	ASTM E 831	E-4/C (E-4/F)		
-40 - 23°C (-40 - 73°F)			0.52 (0.29)	
23 - 55°C (73 - 130°F)			0.50 (0.28)	
55 - 160°C (130 - 320°F)			0.46 (0.26)	
CLTE, Normal	ASTM E 831	E-4/C (E-4/F)		
-40 - 23°C (-40 - 73°F)			0.96 (0.53)	
23 - 55°C (73 - 130°F)			1.18 (0.66)	
55 - 160°C (130 - 320°F)			1.23 (0.68)	
Melting Point	ASTM D 3418	°C (°F)	262 (504)	
Melting Temperature	ISO 3146C	°C (°F)	263 (505)	
Flammability				
Flammability Classification	UL94			
1.5mm			HB	
3.0mm			HB	
Oxygen Index	ISO 4589	%	22	
Temperature Index				
RTI, Electrical	UL 746B	°C		
1.5mm			65	
3.0mm			65	
RTI, Mechanical with Impact	UL 746B	°C		
1.5mm			65	
3.0mm			65	
RTI, Mechanical without Impact	UL 746B	°C		
1.5mm			65	
3.0mm			65	

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.

000717/000814

Start with DuPont Engineering Polymers - www.dupont.com/enggpolymers

Zytel® 8018 NC010

Property	Test Method	Units	Value	
			DAM	50%RH
Other				
Specific Gravity	ASTM D 792		1.19	
Density	ISO 1183	kg/m^3 (g/cm^3)	1190 (1.19)	
Humidity Absorption	ISO 62, Similar to	%		
Equilibrium 50%RH, 2.0mm			1.8	
Water Absorption	ISO 62, Similar to	%		
Immersion 24h, 2.0mm			1.2	
Saturation, immersed, 2.0mm			6.0	
Molding Shrinkage	ISO 294-4	%		
Normal, 2.0mm			1.4	
Parallel, 2.0mm			0.8	
Processing				
Melt Temperature Range		°C (°F)	290-305 (550-580)	
Mold Temperature Range		°C (°F)	65-120 (150-250)	
Processing Moisture Content		%	<0.20	

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.

000717/000814

Start with DuPont Engineering Polymers - www.dupont.com/enggpolymers