



Rynite® PET

thermoplastic polyester resin

Rynite® 935 NC010

Rynite® 935 NC010 is a 35% mica/glass reinforced modified polyethylene terephthalate with exceptionally low warpage, excellent electrical properties, high stiffness, and high heat resistance.

Property	Test Method	Units	Value
Mechanical			
Tensile Strength	ASTM D 638	MPa (kpsi)	
-40C (-40F)			121 (17.5)
23C (73F)			89.6 (13.0)
90C (194F)			40.7 (5.9)
150C (300F)			29.7 (4.3)
Elongation at Break	ASTM D 638	%	
-40C (-40F)			1.8
23C (73F)			2.0
90C (194F)			5.0
150C (300F)			7.0
Tensile Modulus	ASTM D 638	MPa (kpsi)	
-40C (-40F)			11200 (1620)
23C (73F)			9930 (1440)
90C (194F)			3170 (460)
150C (300F)			2420 (351)
Shear Strength	ASTM D 732	MPa (kpsi)	53.7 (7.8)
Poisson's Ratio			0.38
Flexural Modulus	ASTM D 790	MPa (kpsi)	
-40C (-40F)			11700 (1700)
23C (73F)			9600 (1400)
90C (194F)			3370 (489)
150C (300F)			2200 (320)

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.

Mechanical properties measured at 23°C (73°F) unless otherwise stated.

Shrinkage generated per ISO 294-4 based on 60 X 60mm end-gated plaques or ASTM D 955 based on 76 X 127mm (3 X 5in) end-gated plaques.

Rynite® is a DuPont registered trademark.

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Mechanical			
Flexural Strength	ASTM D 790	MPa (kpsi)	
-40C (-40F)			176 (25.5)
23C (73F)			141 (20.5)
90C (194F)			62.1 (9.0)
150C (300F)			42.7 (6.2)
Compressive Strength	ASTM D 695	MPa (kpsi)	141 (20.5)
Flexural Fatigue	ASTM D 671	MPa (kpsi)	
Cycles 10E6			33.1 (4.8)
Flexural Creep Strain	ASTM D 2990	%	
23C (73F), 27.6MPa (4000psi)			0.50
60C (140F), 27.6MPa (4000psi)			0.91
125C (257F), 27.6MPa (4000psi)			2.50
Izod Impact	ASTM D 256	J/m (ft lb/in)	
-40C (-40F)			43 (0.8)
23C (73F)			64 (1.2)
Unnotched Impact	ASTM D 4812	J/m (ft lb/in)	
-40C (-40F)			280 (5.2)
23C (73F)			425 (8.0)
Thermal			
Heat Deflection Temperature	ASTM D 648	°C (°F)	
0.45MPa (66psi)			241 (466)
1.8MPa (264psi)			215 (420)
CLTE, Parallel	ASTM E 831	E-4/C (E-4/F)	
-40 - 23C (-40 - 73F)			0.26 (0.14)
23 - 55C (73 - 130F)			0.16 (0.09)
55 - 160C (130 - 320F)			0.14 (0.08)
CLTE, Normal	ASTM E 831	E-4/C (E-4/F)	
-40 - 23C (-40 - 73F)			0.53 (0.29)
23 - 55C (73 - 130F)			0.52 (0.29)
55 - 160C (130 - 320F)			0.81 (0.45)
Melting Point	ASTM D 3418	°C (°F)	252 (485)
Thermal Conductivity	ASTM C 177	W/m K (Btu in/h ft2 F)	0.26 (1.8)

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Property	Test Method	Units	Value
Electrical			
Surface Resistivity	ASTM D 257	ohm	1 E14
Volume Resistivity	ASTM D 257	ohm cm	1 E15
Dielectric Strength, Short Time	ASTM D 149	kV/mm (V/mil)	
23C (73F), 500 V/s, in oil, 1.6mm (0.062in)			29.5 (750)
23C (73F), 500 V/s, in oil, 3.2mm (0.126in)			23.5 (600)
95C (200F), 500 V/s, in oil, 1.6mm (0.062in)			25.5 (650)
95C (200F), 500 V/s, in oil, 3.2mm (0.126in)			19.5 (495)
150C (300F), 500 V/s, in oil, 1.6mm (0.062in)			14.5 (375)
150C (300F), 500 V/s, in oil, 3.2mm (0.126in)			12.0 (300)
Dielectric Strength, Step by Step	ASTM D 149	kV/mm (V/mil)	
3.2mm (0.126in)			21 (530)
Dielectric Constant	ASTM D 150		
1E3 Hz			3.8
1E6 Hz			3.7
Dissipation Factor	ASTM D 150		
1E3 Hz			0.008
1E6 Hz			0.010
Arc Resistance	ASTM D 495	s	120-180
CTI	UL 746A	V	250-400
Flammability			
Rating @ Thickness	UL94		HB
Thickness Tested	UL94	mm	0.75
High Amperage Arc Ignition Resistance	UL 746A	arcs	60-120
High Voltage Arc Tracking Rate		mm/min	10-25
Hot Wire Ignition	UL 746A	s	>120
Temperature Index			
RTI, Electrical	UL 746B	°C	
0.75mm			140
RTI, Mechanical with Impact	UL 746B	°C	
0.75mm			140
RTI, Mechanical without Impact	UL 746B	°C	
0.75mm			140

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Other			
Specific Gravity	ASTM D 792		1.58
Hardness, Rockwell	ASTM D 785		
Scale M			75
Scale R			115
Coefficient of Friction	ASTM D 1894		
Self, static			0.21
Steel, static			0.19
Water Absorption	ASTM D 570	%	
50%RH,23C,24h			0.05
Mold Shrinkage		%	
Flow, 1.57mm (0.062in)			0.28
Flow, 3.2mm (0.126in)			0.35
Transverse, 1.57mm (0.062in)			0.52
Transverse, 3.2mm (0.126in)			0.65
Processing			
Melt Temperature Range		°C (°F)	280-300 (535-570)
Mold Temperature Range		°C (°F)	>95 (>205)
Drying Time, Dehumidified Dryer		h	4
Drying Temperature		°C (°F)	120 (250)
Processing Moisture Content		%	<0.02

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