

DuPont™ Crastin® PBT

thermoplastic polyester resin

Crastin® ST830FR NC010

Crastin® ST830FR is a Super Tough, flame retarded, unreinforced polybutylene terephthalate molding resin. It is recognized as UL94V-0 at 0.85mm (0.33in).

Property	Test Method	Units	Value
Identification			
Resin Identification	ISO 1043-1/-2/-3/-4		PBT-HIFR(17)
Part Marking Code	ISO 11469		>PBT-HIFR(17)<
Mechanical			
Stress at Break	ISO 527-1/-2	MPa (kpsi)	
-40°C (-40°F)			80 (12)
23°C (73°F)			42 (6)
100°C (212°F)			28 (4)
Strain at Break	ISO 527-1/-2	%	
-40°C (-40°F)			18
23°C (73°F)			>50
100°C (212°F)			159
Tensile Modulus	ISO 527-1/-2	MPa (kpsi)	
-40°C (-40°F)			36100 (5200)
23°C (73°F)			2400 (300)
100°C (212°F)			500 (67)
Flexural Modulus	ISO 178	MPa (kpsi)	
-40°C (-40°F)			2600 (380)
23°C (73°F)			2100 (300)
100°C (212°F)			400 (60)

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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Property	Test Method	Units	Value
Mechanical			
Flexural Strength	ISO 178	MPa (kpsi)	
-40°C (-40°F)			87 (13)
23°C (73°F)			62 (9)
100°C (212°F)			13 (2)
Notched Izod Impact Strength	ISO 180/1A	kJ/m ²	
-40°C (-40°F)			11.6
23°C (73°F)			87
Unnotched Izod Impact Strength	ISO 180/1U	kJ/m ²	
-40°C (-40°F)			170
23°C (73°F)			197
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m ²	
-40°C (-40°F)			5.3 (0.77)
23°C (73°F)			90.5 (13.1)
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m ²	
-40°C (-40°F)			215
23°C (73°F)			260
Thermal			
Deflection Temperature	ISO 75-1/-2	°C (°F)	
0.45MPa			128 (252)
1.80MPa			58 (136)
Melting Temperature	ISO 3146C	°C (°F)	225 (437)
Electrical			
Surface Resistivity	IEC 60093	ohm	1.8E16
Relative Permittivity	IEC 60250	E-4	
1E3 Hz			3.5
1E6 Hz			3.4
Volume Resistivity	IEC 60093	ohm cm	4.7E15

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Property	Test Method	Units	Value
Electrical			
Dielectric Strength, Short Time	ASTM D 149	kV/mm (V/mil)	
23°C (73°F)			24.5 (0.97)
23°C (73°F), 1.6mm (0.063in)			27 (700)
23°C (73°F), 3.2mm (0.126in)			17 (450)
100°C (212°F)			22.7 (0.9)
150°C (302°F)			16.6 (0.67)
Dielectric Constant	ASTM D 150		
1E3 Hz			3.4
1E6 Hz			3.2
Dissipation Factor	IEC 60250	E-4	
1E3 Hz			0.0025
1E6 Hz			0.0176
CTI	UL 746A	V	
3.0mm			600
Flammability			
Flammability Classification	UL94		
0.85mm			V-0
Oxygen Index	ASTM D 2863	%	26
Temperature Index			
RTI, Electrical	UL 746B	°C	
0.85mm			130
RTI, Impact	UL 746B	°C	
0.85mm			130
RTI, Strength	UL 746B	°C	
0.85mm			130

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Property	Test Method	Units	Value
Other			
Density	ISO 1183	kg/m ³ (g/cm ³) %	1363 (1.4)
Mold Shrinkage			
Flow			2.2
Transverse			2.2
Processing			
Melt Temperature Range		°C (°F)	240-260 (465-500)
Melt Temperature Optimum		°C (°F)	250 (480)
Mold Temperature Range		°C (°F)	30-130 (85-265)
Mold Temperature Optimum		°C (°F)	80 (175)
Drying Time, Dehumidified Dryer		h	2-4
Drying Temperature		°C (°F)	110-130 (230-265)
Processing Moisture Content		%	<0.04

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