

# 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
<b>Identification</b>			
Resin Identification	ISO 1043-1/-2/-3/-4		PBT-HIFR(17)
Part Marking Code	ISO 11469		>PBT-HIFR(17)<
<b>Mechanical</b>			
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.

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~~these data may not be valid for such material used in combination with any other materials, additives or pigments or in any process, unless expressly indicated otherwise.~~

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Property	Test Method	Units	Value
<b>Mechanical</b>			
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 <sup>2</sup>	
-40°C (-40°F)			11.6
23°C (73°F)			87
Unnotched Izod Impact Strength	ISO 180/1U	kJ/m <sup>2</sup>	
-40°C (-40°F)			170
23°C (73°F)			197
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m <sup>2</sup>	
-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 <sup>2</sup>	
-40°C (-40°F)			215
23°C (73°F)			260
<b>Thermal</b>			
Deflection Temperature	ISO 75-1/-2	°C (°F)	
0.45MPa			128 (252)
1.80MPa			58 (136)
Melting Temperature	ISO 3146C	°C (°F)	225 (437)
<b>Electrical</b>			
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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<b>Electrical</b>			
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
<b>Flammability</b>			
Flammability Classification	UL94		
0.85mm		V-0	
Oxygen Index	ASTM D 2863	%	26
<b>Temperature Index</b>			
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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<b>Other</b>			
Density	ISO 1183	kg/m <sup>3</sup> (g/cm <sup>3</sup> )	1363 (1.4)
Mold Shrinkage		%	
Flow			2.2
Transverse			2.2
<b>Processing</b>			
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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