

## DuPont Performance Polymers Crastin® ST830FRUV NC010 Polybutylene Terephthalate (PBT) (Unverified Data\*\*)

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), Impact Grade

### Material Notes:

Unreinforced Flame Retardant UV Stabilized Polybutylene Terephthalate Crastin ST830FRUV NC010 is an unreinforced Super Tough flame retardant polybutylene terephthalate resin for injection molding. It contains a UV light stabilizer and is recognized as information provided by DuPont Performance Polymers

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_DuPont-Performance-Polymers-Crastin-ST830FRUV-NC010-Polybutylene-Terephthalate-PBT-nbspUnverified-Data.php](http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Crastin-ST830FRUV-NC010-Polybutylene-Terephthalate-PBT-nbspUnverified-Data.php)

Physical Properties	Metric	English	Comments
Density	1.17 g/cc	0.0423 lb/in <sup>3</sup>	
	1.37 g/cc	0.0495 lb/in <sup>3</sup>	ISO 1183
Linear Mold Shrinkage, Flow	0.020 cm/cm	0.020 in/in	ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.016 cm/cm	0.016 in/in	ISO 294-4 2577

Mechanical Properties	Metric	English	Comments
Tensile Stress	5.62 MPa	815 psi	
	@Strain 1.20 %, Temperature 90.0 °C	@Strain 1.20 %, Temperature 194 °F	ISO 11403-1 -2
	12.17 MPa	1765 psi	
	@Strain 3.20 %, Temperature 90.0 °C	@Strain 3.20 %, Temperature 194 °F	ISO 11403-1 -2
	14.48 MPa	2100 psi	
	@Strain 1.00 %, Temperature 40.0 °C	@Strain 1.00 %, Temperature 104 °F	ISO 11403-1 -2
	16.27 MPa	2360 psi	
	@Strain 0.800 %, Temperature 23.0 °C	@Strain 0.800 %, Temperature 73.4 °F	ISO 11403-1 -2
	16.69 MPa	2421 psi	
	@Strain 8.00 %, Temperature 90.0 °C	@Strain 8.00 %, Temperature 194 °F	ISO 11403-1 -2
	18.44 MPa	2675 psi	
	@Strain 0.800 %, Temperature 0.000 °C	@Strain 0.800 %, Temperature 32.0 °F	ISO 11403-1 -2
	19.45 MPa	2821 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 0.800 %, Temperature -20.0 °C	@Strain 0.800 %, Temperature -4.00 °F	ISO 11403-1 -2
	20.17 MPa	2925 psi	
	@Strain 30.0 %, Temperature 90.0 °C	@Strain 30.0 %, Temperature 194 °F	ISO 11403-1 -2
	25.27 MPa	3665 psi	
	@Strain 2.40 %, Temperature 40.0 °C	@Strain 2.40 %, Temperature 104 °F	ISO 11403-1 -2
	26.91 MPa	3903 psi	
	@Strain 1.40 %, Temperature 23.0 °C	@Strain 1.40 %, Temperature 73.4 °F	ISO 11403-1 -2
	28.12 MPa	4078 psi	
	@Strain 3.60 %, Temperature 40.0 °C	@Strain 3.60 %, Temperature 104 °F	ISO 11403-1 -2
	30.15 MPa	4373 psi	
	@Strain 6.00 %, Temperature 40.0 °C	@Strain 6.00 %, Temperature 104 °F	ISO 11403-1 -2
	33.86 MPa	4911 psi	
	@Strain 1.60 %, Temperature 0.000 °C	@Strain 1.60 %, Temperature 32.0 °F	ISO 11403-1 -2
	35.74 MPa	5184 psi	
	@Strain 2.20 %, Temperature 23.0 °C	@Strain 2.20 %, Temperature 73.4 °F	ISO 11403-1 -2
	39.39 MPa	5713 psi	
	@Strain 3.00 %, Temperature 23.0 °C	@Strain 3.00 %, Temperature 73.4 °F	ISO 11403-1 -2
	43.96 MPa	6376 psi	
	@Strain 2.00 %, Temperature -20.0 °C	@Strain 2.00 %, Temperature -4.00 °F	ISO 11403-1 -2
	46.2 MPa	6700 psi	
	@Strain 2.60 %, Temperature 0.000 °C	@Strain 2.60 %, Temperature 32.0 °F	ISO 11403-1 -2
	51.41 MPa	7456 psi	
	@Strain 3.80 %, Temperature 0.000 °C	@Strain 3.80 %, Temperature 32.0 °F	ISO 11403-1 -2
	55.38 MPa	8032 psi	
	@Strain 2.90 %, Temperature -20.0 °C	@Strain 2.90 %, Temperature -4.00 °F	ISO 11403-1 -2

Mechanical Properties	Metric MPa	English	Comments
	@Strain 4.00 %, Temperature -20.0 °C	@Strain 4.00 %, Temperature -4.00 °F	ISO 11403-1 -2
Tensile Strength, Yield	40.0 MPa	5800 psi	ISO 527-1/-2
Elongation at Break	45 %	45 %	Nominal; ISO 527-1/-2
Elongation at Yield	9.0 %	9.0 %	ISO 527-1/-2
Tensile Modulus	2.20 GPa	319 ksi	ISO 527-1/-2
Flexural Modulus	2.10 GPa	305 ksi	ISO 178
Secant Modulus	0.06492 GPa	9.416 ksi	ISO 11403-1 -2
	@Strain 50.0 %, Temperature 40.0 °C	@Strain 50.0 %, Temperature 104 °F	
	0.582 GPa	84.4 ksi	ISO 11403-1 -2
	@Strain 7.00 %, Temperature 23.0 °C	@Strain 7.00 %, Temperature 73.4 °F	
	0.71525 GPa	103.74 ksi	ISO 11403-1 -2
	@Strain 4.00 %, Temperature 40.0 °C	@Strain 4.00 %, Temperature 104 °F	
	1.05 GPa	153 ksi	ISO 11403-1 -2
	@Strain 2.40 %, Temperature 40.0 °C	@Strain 2.40 %, Temperature 104 °F	
	1.12 GPa	162 ksi	ISO 11403-1 -2
	@Strain 3.60 %, Temperature 23.0 °C	@Strain 3.60 %, Temperature 73.4 °F	
	1.2093 GPa	175.40 ksi	ISO 11403-1 -2
	@Strain 4.30 %, Temperature 0.000 °C	@Strain 4.30 %, Temperature 32.0 °F	
	1.2776 GPa	185.30 ksi	ISO 11403-1 -2
	@Strain 5.00 %, Temperature -20.0 °C	@Strain 5.00 %, Temperature -4.00 °F	
	1.448 GPa	210.0 ksi	ISO 11403-1 -2
	@Strain 1.00 %, Temperature 40.0 °C	@Strain 1.00 %, Temperature 104 °F	
	1.55 GPa	224 ksi	ISO 11403-1 -2
	@Strain 2.40 %, Temperature 23.0 °C	@Strain 2.40 %, Temperature 73.4 °F	
	1.63 GPa	236 ksi	

Mechanical Properties	Metric	English	Comments
	@Strain 3.00 %, Temperature 0.000 °C	@Strain 3.00 %, Temperature 32.0 °F	ISO 11403-1 -2
	1.78 GPa	258 ksi	
	@Strain 3.30 %, Temperature -20.0 °C	@Strain 3.30 %, Temperature -4.00 °F	ISO 11403-1 -2
	1.92 GPa	279 ksi	
	@Strain 1.40 %, Temperature 23.0 °C	@Strain 1.40 %, Temperature 73.4 °F	ISO 11403-1 -2
	2.03 GPa	295 ksi	
	@Strain 0.800 %, Temperature 23.0 °C	@Strain 0.800 %, Temperature 73.4 °F	ISO 11403-1 -2
	2.12 GPa	307 ksi	
	@Strain 1.60 %, Temperature 0.000 °C	@Strain 1.60 %, Temperature 32.0 °F	ISO 11403-1 -2
	2.198 GPa	318.8 ksi	
	@Strain 2.00 %, Temperature -20.0 °C	@Strain 2.00 %, Temperature -4.00 °F	ISO 11403-1 -2
	2.305 GPa	334.3 ksi	
	@Strain 0.800 %, Temperature 0.000 °C	@Strain 0.800 %, Temperature 32.0 °F	ISO 11403-1 -2
	2.43 GPa	353 ksi	
	@Strain 0.800 %, Temperature -20.0 °C	@Strain 0.800 %, Temperature -4.00 °F	ISO 11403-1 -2
Izod Impact, Notched (ISO)	70.0 kJ/m <sup>2</sup>	33.3 ft-lb/in <sup>2</sup>	ISO 180/1A
	10.0 kJ/m <sup>2</sup>	4.76 ft-lb/in <sup>2</sup>	
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 180/1A
	10.0 kJ/m <sup>2</sup>	4.76 ft-lb/in <sup>2</sup>	
	@Temperature -40.0 °C	@Temperature -40.0 °F	ISO 180/1A
Izod Impact, Unnotched (ISO)	NB	NB	ISO 180/1U
	220 kJ/m <sup>2</sup>	105 ft-lb/in <sup>2</sup>	
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 180/1U
	220 kJ/m <sup>2</sup>	105 ft-lb/in <sup>2</sup>	
	@Temperature -40.0 °C	@Temperature -40.0 °F	ISO 180/1U
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
	35.0 J/cm <sup>2</sup>	167 ft-lb/in <sup>2</sup>	

Mechanical Properties	Metric	English	ISO 179/1eU Comments
	35.0 J/cm <sup>2</sup> @Temperature -30.0 °C	167 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	6.50 J/cm <sup>2</sup>	30.9 ft-lb/in <sup>2</sup>	ISO 179/1eA
	1.00 J/cm <sup>2</sup> @Temperature -30.0 °C	4.76 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179/1eA
	1.00 J/cm <sup>2</sup> @Temperature -40.0 °C	4.76 ft-lb/in <sup>2</sup> @Temperature -40.0 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	190 µm/m-°C	106 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	190 µm/m-°C	106 µin/in-°F	ISO 11359-1/-2
Melting Point	225 °C	437 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	125 °C	257 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	55.0 °C	131 °F	ISO 75-1/-2
Flammability, UL94	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	IEC 60695-11-10
	V-0 @Thickness 0.800 mm	V-0 @Thickness 0.0315 in	IEC 60695-11-10

Electrical Properties	Metric	English	Comments
Comparative Tracking Index	600 V	600 V	IEC 60112

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