

DuPont Performance Polymers Crastin® 6130 NC010 PBT (Unverified Data**)

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

Material Notes:

Crastin® 6130 NC010 is an unreinforced, medium high viscosity polybutylene terephthalate resin for extrusion and injection molding. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Crastin-6130-NC010-PBT-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.31 g/cc	1.31 g/cc	ASTM D792
Density	1.30 g/cc	0.0470 lb/in³	ISO 1183
Water Absorption	0.070 % @Temperature 23.0 °C	0.070 % @Temperature 73.4 °F	22h @ 23°C(73°F); ASTM D570
Linear Mold Shrinkage	0.016 cm/cm	0.016 in/in	Flow
	0.016 cm/cm	0.016 in/in	Transverse
Linear Mold Shrinkage, Flow	0.020 cm/cm	0.020 in/in	Annealed; ISO 294-4
	0.016 cm/cm @Thickness 2.00 mm	0.016 in/in @Thickness 0.0787 in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.021 cm/cm	0.021 in/in	Annealed; ISO 294-4
	0.015 cm/cm @Thickness 2.00 mm	0.015 in/in @Thickness 0.0787 in	ISO 294-4
Melt Flow	15.4 g/10 min @Load 2.16 kg, Temperature 250 °C	15.4 g/10 min @Load 4.76 lb, Temperature 482 °F	ISO 1133
	15.5 g/10 min @Load 2.16 kg, Temperature 250 °C	15.5 g/10 min @Load 4.76 lb, Temperature 482 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	120	120	ASTM D785
Tensile Strength	12.0 MPa @Temperature 149 °C	1740 psi @Temperature 300 °F	ASTM D638
	20.0 MPa	2900 psi	

Mechanical Properties	Metric @ Temperature 90.0 °C	English @ Temperature 194 °F	ASTM D638 Comments
	55.0 MPa	7980 psi	ASTM D638
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	93.0 MPa	13500 psi	ASTM D638
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Tensile Strength, Yield	59.0 MPa	8560 psi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	11 %	11 %	ASTM D638
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	50 %	50 %	nominal; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	110 %	110 %	50mm/min; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	>= 300 %	>= 300 %	ASTM D638
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	>= 300 %	>= 300 %	ASTM D638
	@Temperature 90.0 °C	@Temperature 194 °F	
	>= 300 %	>= 300 %	ASTM D638
	@Temperature 150 °C	@Temperature 302 °F	
Elongation at Yield	8.0 %	8.0 %	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus	2.60 GPa	377 ksi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Strength	8.00 MPa	1160 psi	ASTM D790
	@Temperature 149 °C	@Temperature 300 °F	
	13.0 MPa	1890 psi	ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
	80.0 MPa	11600 psi	ASTM D790
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	120 MPa	17400 psi	ASTM D790
	@Temperature -40.0 °C	@Temperature -40.0 °F	

Mechanical Properties	Metric	English	Comments
Flexural Modulus	0.234 GPa	33.9 ksi	ASTM D790
	@Temperature 149 °C	@Temperature 300 °F	
	0.331 GPa	48.0 ksi	ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
	2.413 GPa	350.0 ksi	ASTM D790
Compressive Strength	@Temperature 23.0 °C	@Temperature 73.4 °F	
	3.00 GPa	435 ksi	ASTM D790
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	75.0 MPa	10900 psi	ASTM D695
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched	0.260 J/cm	0.487 ft-lb/in	ASTM D256
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	0.480 J/cm	0.899 ft-lb/in	ASTM D256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	NB	NB	ASTM D4812
Izod Impact, Unnotched	@Temperature -40.0 °C	@Temperature -40.0 °F	
	NB	NB	ASTM D4812
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	4.00 kJ/m²	1.90 ft-lb/in²	ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.450 J/cm²	2.14 ft-lb/in²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.500 J/cm²	2.38 ft-lb/in²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	500 µm/m-°C	278 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	
	500 µm/m-°C	278 µin/in-°F	ASTM E 831
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	

Thermal Properties	500 $\mu\text{m}/\text{m}^{\circ}\text{C}$ Metric	278 $\mu\text{in}/\text{in}^{\circ}\text{F}$ English	Comments ASTM E 831
	@Temperature 55.0 - 160 $^{\circ}\text{C}$	@Temperature 131 - 320 $^{\circ}\text{F}$	
	500 $\mu\text{m}/\text{m}^{\circ}\text{C}$	278 $\mu\text{in}/\text{in}^{\circ}\text{F}$	
	@Temperature -40.0 - 23.0 $^{\circ}\text{C}$	@Temperature -40.0 - 73.4 $^{\circ}\text{F}$	ISO 11359-1/-2
	500 $\mu\text{m}/\text{m}^{\circ}\text{C}$	278 $\mu\text{in}/\text{in}^{\circ}\text{F}$	
	@Temperature 23.0 - 55.0 $^{\circ}\text{C}$	@Temperature 73.4 - 131 $^{\circ}\text{F}$	ISO 11359-1/-2
	500 $\mu\text{m}/\text{m}^{\circ}\text{C}$	278 $\mu\text{in}/\text{in}^{\circ}\text{F}$	
	@Temperature 55.0 - 160 $^{\circ}\text{C}$	@Temperature 131 - 320 $^{\circ}\text{F}$	ISO 11359-1/-2
CTE, linear, Transverse to Flow	90.0 $\mu\text{m}/\text{m}^{\circ}\text{C}$	50.0 $\mu\text{in}/\text{in}^{\circ}\text{F}$	
	@Temperature -40.0 - 23.0 $^{\circ}\text{C}$	@Temperature -40.0 - 73.4 $^{\circ}\text{F}$	ASTM E 831
	90.0 $\mu\text{m}/\text{m}^{\circ}\text{C}$	50.0 $\mu\text{in}/\text{in}^{\circ}\text{F}$	
	@Temperature -40.0 - 23.0 $^{\circ}\text{C}$	@Temperature -40.0 - 73.4 $^{\circ}\text{F}$	ISO 11359-1/-2
	144 $\mu\text{m}/\text{m}^{\circ}\text{C}$	80.0 $\mu\text{in}/\text{in}^{\circ}\text{F}$	
	@Temperature 23.0 - 55.0 $^{\circ}\text{C}$	@Temperature 73.4 - 131 $^{\circ}\text{F}$	ASTM E 831
	144 $\mu\text{m}/\text{m}^{\circ}\text{C}$	80.0 $\mu\text{in}/\text{in}^{\circ}\text{F}$	
	@Temperature 23.0 - 55.0 $^{\circ}\text{C}$	@Temperature 73.4 - 131 $^{\circ}\text{F}$	ISO 11359-1/-2
	162 $\mu\text{m}/\text{m}^{\circ}\text{C}$	90.0 $\mu\text{in}/\text{in}^{\circ}\text{F}$	
	@Temperature 55.0 - 160 $^{\circ}\text{C}$	@Temperature 131 - 320 $^{\circ}\text{F}$	ASTM E 831
	162 $\mu\text{m}/\text{m}^{\circ}\text{C}$	90.0 $\mu\text{in}/\text{in}^{\circ}\text{F}$	
	@Temperature 55.0 - 160 $^{\circ}\text{C}$	@Temperature 131 - 320 $^{\circ}\text{F}$	ISO 11359-1/-2
Melting Point	225 $^{\circ}\text{C}$	437 $^{\circ}\text{F}$	10 $^{\circ}\text{C}/\text{min}$; ISO 11357-1/-3
	225 $^{\circ}\text{C}$	437 $^{\circ}\text{F}$	ASTM D3418
Deflection Temperature at 0.46 MPa (66 psi)	115 $^{\circ}\text{C}$	239 $^{\circ}\text{F}$	ISO 75-1/-2
	150 $^{\circ}\text{C}$	302 $^{\circ}\text{F}$	ASTM D648
	180 $^{\circ}\text{C}$	356 $^{\circ}\text{F}$	Annealed; ISO 75-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	ASTM D257
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	IEC 60093
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Surface Resistance	3.00e+12 ohm	3.00e+12 ohm	ASTM D257
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Dielectric Constant	3.0	3.0	ASTM D150
	@Frequency 1000 Hz, Temperature 23.0 °C	@Frequency 1000 Hz, Temperature 73.4 °F	
	3.0	3.0	ASTM D150
	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@Frequency 1.00e+6 Hz, Temperature 73.4 °F	
	3.2	3.2	IEC 60250
	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@Frequency 1.00e+6 Hz, Temperature 73.4 °F	
Dielectric Strength	14.0 kV/mm	356 kV/in	Short Time; ASTM D149
	@Thickness 3.20 mm, Temperature 23.0 °C	@Thickness 0.126 in, Temperature 73.4 °F	
	22.0 kV/mm	559 kV/in	Short Time; ASTM D149
	@Thickness 1.60 mm, Temperature 23.0 °C	@Thickness 0.0630 in, Temperature 73.4 °F	
Dissipation Factor	0.0020	0.0020	ASTM D150
	@Frequency 1000 Hz, Temperature 23.0 °C	@Frequency 1000 Hz, Temperature 73.4 °F	
	0.020	0.020	ASTM D150
	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@Frequency 1.00e+6 Hz, Temperature 73.4 °F	
Comparative Tracking Index	600 V	600 V	UL 746A
	@Temperature 23.0 °C	@Temperature 73.4 °F	

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