

DuPont Performance Polymers Crastin® SK641FR NC010 Polybutylene Terephthalate (PBT)

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), 10% Glass Fiber Filled

Material Notes:

10% Glass Reinforced Flame Retardant Polybutylene Terephthalate Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Crastin-SK641FR-NC010-Polybutylene-Terephthalate-PBT.php

Physical Properties	Metric	English	Comments
Density	1.54 g/cc	0.0556 lb/in ³	ISO 1183
Water Absorption	0.35 % @Thickness 2.00 mm	0.35 % @Thickness 0.0787 in	Sim. to ISO 62
Moisture Absorption	0.150 % @Thickness 2.00 mm	0.150 % @Thickness 0.0787 in	Sim. to ISO 62
Linear Mold Shrinkage, Flow	0.0080 cm/cm	0.0080 in/in	ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.013 cm/cm	0.013 in/in	ISO 294-4 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	93.0 MPa	13500 psi	ISO 527-1/-2
Tensile Stress	3.73 MPa @Strain 0.250 %, Temperature 160 °C	541 psi @Strain 0.250 %, Temperature 320 °F	ISO 11403-1 -2
	10.4 MPa @Strain 0.250 %, Temperature 40.0 °C	1510 psi @Strain 0.250 %, Temperature 104 °F	ISO 11403-1 -2
	12.5 MPa @Strain 0.250 %, Temperature 23.0 °C	1810 psi @Strain 0.250 %, Temperature 73.4 °F	ISO 11403-1 -2
	15.0 MPa @Strain 0.250 %, Temperature 0.000 °C	2180 psi @Strain 0.250 %, Temperature 32.0 °F	ISO 11403-1 -2
	15.5 MPa @Strain 1.50 %, Temperature 160 °C	2250 psi @Strain 1.50 %, Temperature 320 °F	ISO 11403-1 -2
	16.3 MPa	2360 psi	

Mechanical Properties	Metric	English	ISO 11403-1 -2 Comments
	@Strain 0.250 %, Temperature -20.0 °C	@Strain 0.250 %, Temperature -4.00 °F	
	17.0 MPa	2470 psi	
	@Strain 0.250 %, Temperature -40.0 °C	@Strain 0.250 %, Temperature -40.0 °F	ISO 11403-1 -2
	22.4 MPa	3250 psi	
	@Strain 3.00 %, Temperature 160 °C	@Strain 3.00 %, Temperature 320 °F	ISO 11403-1 -2
	49.4 MPa	7160 psi	
	@Strain 1.50 %, Temperature 40.0 °C	@Strain 1.50 %, Temperature 104 °F	ISO 11403-1 -2
	63.6 MPa	9220 psi	
	@Strain 3.00 %, Temperature 40.0 °C	@Strain 3.00 %, Temperature 104 °F	ISO 11403-1 -2
	63.6 MPa	9220 psi	
	@Strain 1.50 %, Temperature 23.0 °C	@Strain 1.50 %, Temperature 73.4 °F	ISO 11403-1 -2
	74.6 MPa	10800 psi	
	@Strain 1.50 %, Temperature 0.000 °C	@Strain 1.50 %, Temperature 32.0 °F	ISO 11403-1 -2
	79.6 MPa	11500 psi	
	@Strain 1.50 %, Temperature -20.0 °C	@Strain 1.50 %, Temperature -4.00 °F	ISO 11403-1 -2
	82.6 MPa	12000 psi	
	@Strain 1.50 %, Temperature -40.0 °C	@Strain 1.50 %, Temperature -40.0 °F	ISO 11403-1 -2
	84.8 MPa	12300 psi	
	@Strain 3.10 %, Temperature 23.0 °C	@Strain 3.10 %, Temperature 73.4 °F	ISO 11403-1 -2
	95.0 MPa	13800 psi	
	@Strain 2.80 %, Temperature 0.000 °C	@Strain 2.80 %, Temperature 32.0 °F	ISO 11403-1 -2
	105 MPa	15200 psi	
	@Strain 2.80 %, Temperature -20.0 °C	@Strain 2.80 %, Temperature -4.00 °F	ISO 11403-1 -2
	114 MPa	16500 psi	
	@Strain 2.80 %, Temperature -40.0 °C	@Strain 2.80 %, Temperature -40.0 °F	ISO 11403-1 -2

Mechanical Properties	Metric	English	Comments 2
Tensile Modulus	6.00 GPa	870 ksi	ISO 527-1/-2
Secant Modulus	1.05 GPa	152 ksi	ISO 11403-1 -2
	@Strain 3.50 %, Temperature 100 °C	@Strain 3.50 %, Temperature 212 °F	
	1.20 GPa	174 ksi	ISO 11403-1 -2
	@Strain 3.50 %, Temperature 80.0 °C	@Strain 3.50 %, Temperature 176 °F	
	1.57 GPa	227 ksi	ISO 11403-1 -2
	@Strain 1.50 %, Temperature 100 °C	@Strain 1.50 %, Temperature 212 °F	
	1.76 GPa	255 ksi	ISO 11403-1 -2
	@Strain 1.50 %, Temperature 80.0 °C	@Strain 1.50 %, Temperature 176 °F	
	1.94 GPa	281 ksi	ISO 11403-1 -2
	@Strain 3.30 %, Temperature 40.0 °C	@Strain 3.30 %, Temperature 104 °F	
	2.06 GPa	299 ksi	ISO 11403-1 -2
	@Strain 0.250 %, Temperature 100 °C	@Strain 0.250 %, Temperature 212 °F	
	2.312 GPa	335.3 ksi	ISO 11403-1 -2
	@Strain 0.250 %, Temperature 80.0 °C	@Strain 0.250 %, Temperature 176 °F	
	3.29 GPa	478 ksi	ISO 11403-1 -2
	@Strain 1.50 %, Temperature 40.0 °C	@Strain 1.50 %, Temperature 104 °F	
	4.16 GPa	603 ksi	ISO 11403-1 -2
	@Strain 0.250 %, Temperature 40.0 °C	@Strain 0.250 %, Temperature 104 °F	
	4.24 GPa	615 ksi	ISO 11403-1 -2
	@Strain 1.50 %, Temperature 23.0 °C	@Strain 1.50 %, Temperature 73.4 °F	
	4.97 GPa	721 ksi	ISO 11403-1 -2
	@Strain 1.50 %, Temperature 0.000 °C	@Strain 1.50 %, Temperature 32.0 °F	
	5.00 GPa	725 ksi	ISO 11403-1 -2

Mechanical Properties	Metric	English	Comments
	@Strain 0.250 %, Temperature 23.0 °C	@Strain 0.250 %, Temperature 73.4 °F	
	5.31 GPa	770 ksi	
	@Strain 1.50 %, Temperature -20.0 °C	@Strain 1.50 %, Temperature -4.00 °F	ISO 11403-1 -2
	5.51 GPa	799 ksi	
	@Strain 1.50 %, Temperature -40.0 °C	@Strain 1.50 %, Temperature -40.0 °F	ISO 11403-1 -2
	6.00 GPa	870 ksi	
	@Strain 0.250 %, Temperature 0.000 °C	@Strain 0.250 %, Temperature 32.0 °F	ISO 11403-1 -2
	6.52 GPa	946 ksi	
	@Strain 0.250 %, Temperature -20.0 °C	@Strain 0.250 %, Temperature -4.00 °F	ISO 11403-1 -2
	6.80 GPa	986 ksi	
	@Strain 0.250 %, Temperature -40.0 °C	@Strain 0.250 %, Temperature -40.0 °F	ISO 11403-1 -2
Charpy Impact Unnotched	5.10 J/cm ²	24.3 ft-lb/in ²	ISO 179/1eU
	3.70 J/cm ²	17.6 ft-lb/in ²	
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	0.650 J/cm ²	3.09 ft-lb/in ²	ISO 179/1eA
	0.470 J/cm ²	2.24 ft-lb/in ²	
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179/1eA
Tensile Creep Modulus, 1 hour	4600 MPa	667000 psi	ISO 899-1
	@Time 3600 sec	@Time 1.00 hour	
Tensile Creep Modulus, 1000 hours	3500 MPa	508000 psi	ISO 899-1
	@Time 3.60e+6 sec	@Time 1000 hour	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	60.0 µm/m-°C	33.3 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	110 µm/m-°C	61.1 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)	215 °C	419 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	200 °C	392 °F	ISO 75-1/-2

Thermal Properties	Metric	English	Comments
Flammability, UL94	@Thickness 1.50 mm	@Thickness 0.0591 in	IEC 60695-11-10
	V-0	V-0	IEC 60695-11-10
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Oxygen Index	31 %	31 %	ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00e+15$ ohm-cm	$\geq 1.00e+15$ ohm-cm	IEC 60093
Surface Resistance	$1.00e+15$ ohm	$1.00e+15$ ohm	IEC 60093
Dielectric Constant	3.6	3.6	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	26.0 kV/mm	660 kV/in	IEC 60243-1
Dissipation Factor	0.0030	0.0030	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	

Descriptive Properties	Value	Comments
Delivery Form	Pellets	
Processing	Injection Moulding	
Regional Availability	Europe	
	Near East/Africa	
UL recognition	UL	

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