

DuPont Performance Polymers Crastin® SK642FR NC010 Polybutylene Terephthalate (PBT)

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), 20% Glass Fiber Filled

Material Notes:

15% Glass Reinforced Flame Retardant Polybutylene Terephthalate Crastin SK642FR is a 15% glass fibre reinforced flame retardant polybutylene terephthalate for injection moulding. It has a UL94 V-0 rating @ 1.5mm. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Crastin-SK642FR-NC010-Polybutylene-Terephthalate-PBT.php

Physical Properties	Metric	English	Comments
Density	1.37 g/cc	0.0495 lb/in ³	
	1.58 g/cc	0.0571 lb/in ³	ISO 1183
Water Absorption	0.33 %	0.33 %	Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Moisture Absorption	0.140 %	0.140 %	Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Viscosity	102700 cP	102700 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 260 °C	@Shear Rate 5000 1/s, Temperature 500 °F	
	122300 cP	122300 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 250 °C	@Shear Rate 5000 1/s, Temperature 482 °F	
	147800 cP	147800 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 240 °C	@Shear Rate 5000 1/s, Temperature 464 °F	
	310520 cP	310520 cP	ISO 11403-1 -2
	@Shear Rate 500 1/s, Temperature 260 °C	@Shear Rate 500 1/s, Temperature 500 °F	
375900 cP	375900 cP	ISO 11403-1 -2	
@Shear Rate 500 1/s, Temperature 250 °C	@Shear Rate 500 1/s, Temperature 482 °F		
460190 cP	460190 cP	ISO 11403-1 -2	
@Shear Rate 500 1/s, Temperature 240 °C	@Shear Rate 500 1/s, Temperature 464 °F		
Linear Mold Shrinkage, Flow	0.0070 cm/cm	0.0070 in/in	ISO 294-4 2577

Physical Properties	Metric	English	Comments
Linear Mold Shrinkage, Transverse	0.012 cm/cm	0.012 in/in	ISO 294-4 2577
	0.015 cm/cm	0.015 in/in	annealed; ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	100 MPa	14500 psi	ISO 527-1/-2
Elongation at Break	3.4 %	3.4 %	ISO 527-1/-2
Tensile Modulus	7.20 GPa	1040 ksi	ISO 527-1/-2
Flexural Strength	155 MPa	22500 psi	ISO 178
Izod Impact, Notched (ISO)	7.00 kJ/m ²	3.33 ft-lb/in ²	ISO 180/1A
	6.00 kJ/m ² @Temperature -30.0 °C	2.86 ft-lb/in ² @Temperature -22.0 °F	ISO 180/1A
Izod Impact, Unnotched (ISO)	33.0 kJ/m ²	15.7 ft-lb/in ²	ISO 180/1U
	32.0 kJ/m ² @Temperature -30.0 °C	15.2 ft-lb/in ² @Temperature -22.0 °F	ISO 180/1U
Charpy Impact Unnotched	5.30 J/cm ²	25.2 ft-lb/in ²	ISO 179/1eU
	4.40 J/cm ² @Temperature -30.0 °C	20.9 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	0.800 J/cm ²	3.81 ft-lb/in ²	ISO 179/1eA
	0.710 J/cm ² @Temperature -30.0 °C	3.38 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
Tensile Creep Modulus, 1 hour	6000 MPa @Time 3600 sec	870000 psi @Time 1.00 hour	ISO 899-1
Tensile Creep Modulus, 1000 hours	4800 MPa @Time 3.60e+6 sec	696000 psi @Time 1000 hour	ISO 899-1

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	50.0 µm/m-°C	27.8 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
Specific Heat Capacity	1.74 J/g-°C	0.416 BTU/lb-°F	

Thermal Properties	Metric	English	Comments
Melting Point	225 °C	437 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	218 °C	424 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	203 °C	397 °F	ISO 75-1/-2
Vicat Softening Point	207 °C	405 °F	50°C/h 50N; ISO 306
Flammability, UL94	V-0	V-0	IEC 60695-11-10
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	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	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	IEC 60093
Surface Resistance	1.00e+15 ohm	1.00e+15 ohm	IEC 60093
Dielectric Constant	3.5	3.5	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.7	3.7	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	28.0 kV/mm	711 kV/in	IEC 60243-1
Dissipation Factor	0.0030	0.0030	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.017	0.017	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	250 V	250 V	IEC 60112

Descriptive Properties	Value	Comments
Delivery Form	Pellets	
Part Marking Code	>PBT-GF15FR(17)<	ISO 11469
Processing	Injection Moulding	

Descriptive Properties	Value	Comments
	Europe	
	Global	
	Near East/Africa	
	North America	
	South and Central America	
Resin Identification	PBT-GF15FR(17)	
UL recognition	UL	

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