

DuPont Performance Polymers Crastin® SK645FR NC010 Polybutylene Terephthalate (PBT) (Unverified Data**)&

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), 30% Glass Fiber Filled

Material Notes:

30% Glass Reinforced Flame Retardant Polybutylene Terephthalate Crastin SK645FR is a flame retardant 30% glass reinforced polybutylene terephthalate molding resin. It is recognized as UL94V-0 at 0.75mm. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Crastin-SK645FR-NC010-Polybutylene-Terephthalate-PBT-nbspUnverified-Datal.php

Physical Properties	Metric	English	Comments
Density	1.49 g/cc	0.0538 lb/in ³	
	1.71 g/cc	0.0618 lb/in ³	ISO 1183
Water Absorption	0.30 %	0.30 %	Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Moisture Absorption	0.100 %	0.100 %	Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Viscosity	110800 cP	110800 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 260 °C	@Shear Rate 5000 1/s, Temperature 500 °F	
	124700 cP	124700 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 250 °C	@Shear Rate 5000 1/s, Temperature 482 °F	
	141400 cP	141400 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 240 °C	@Shear Rate 5000 1/s, Temperature 464 °F	
348200 cP	348200 cP	ISO 11403-1 -2	
@Shear Rate 500 1/s, Temperature 260 °C	@Shear Rate 500 1/s, Temperature 500 °F		
405300 cP	405300 cP	405300 cP	ISO 11403-1 -2
	@Shear Rate 500 1/s, Temperature 250 °C	@Shear Rate 500 1/s, Temperature 482 °F	
473400 cP	473400 cP	473400 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	0.0030 cm/cm	0.0030 in/in	ISO 294-4 2577

Physical Properties	0.0050 cm/cm Metric	0.0050 in/in English	Annealed; ISO 294-4 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	125 MPa	18100 psi	ISO 527-1/-2
Tensile Stress	9.09 MPa	1320 psi	ISO 11403-1 -2
	@Strain 0.250 %, Temperature 150 °C	@Strain 0.250 %, Temperature 302 °F	
	14.1 MPa	2050 psi	ISO 11403-1 -2
	@Strain 0.250 %, Temperature 90.0 °C	@Strain 0.250 %, Temperature 194 °F	
	22.615 MPa	3280.0 psi	ISO 11403-1 -2
	@Strain 0.260 %, Temperature 40.0 °C	@Strain 0.260 %, Temperature 104 °F	
	23.34 MPa	3385 psi	ISO 11403-1 -2
	@Strain 0.840 %, Temperature 160 °C	@Strain 0.840 %, Temperature 320 °F	
	26.12 MPa	3788 psi	ISO 11403-1 -2
	@Strain 0.215 %, Temperature -20.0 °C	@Strain 0.215 %, Temperature -4.00 °F	
	28.13 MPa	4080 psi	ISO 11403-1 -2
	@Strain 0.225 %, Temperature -40.0 °C	@Strain 0.225 %, Temperature -40.0 °F	
	30.115 MPa	4367.8 psi	ISO 11403-1 -2
	@Strain 0.265 %, Temperature 23.0 °C	@Strain 0.265 %, Temperature 73.4 °F	
	30.365 MPa	4404.1 psi	ISO 11403-1 -2
	@Strain 0.265 %, Temperature 0.000 °C	@Strain 0.265 %, Temperature 32.0 °F	
	34.5 MPa	5000 psi	ISO 11403-1 -2
	@Strain 1.50 %, Temperature 150 °C	@Strain 1.50 %, Temperature 302 °F	
	34.61 MPa	5020 psi	ISO 11403-1 -2
	@Strain 1.68 %, Temperature 160 °C	@Strain 1.68 %, Temperature 320 °F	
	39.16 MPa	5680 psi	

Mechanical Properties	Metric	English	Comments 1 -2
	@Strain 2.30 %, Temperature 160 °C	@Strain 2.30 %, Temperature 320 °F	
	42.25 MPa	6128 psi	
	@Strain 2.92 %, Temperature 160 °C	@Strain 2.92 %, Temperature 320 °F	ISO 11403-1 -2
	43.8 MPa	6350 psi	
	@Strain 3.00 %, Temperature 150 °C	@Strain 3.00 %, Temperature 302 °F	ISO 11403-1 -2
	56.1 MPa	8140 psi	
	@Strain 1.50 %, Temperature 90.0 °C	@Strain 1.50 %, Temperature 194 °F	ISO 11403-1 -2
	69.7 MPa	10100 psi	
	@Strain 3.00 %, Temperature 90.0 °C	@Strain 3.00 %, Temperature 194 °F	ISO 11403-1 -2
	89.325 MPa	12956 psi	
	@Strain 1.48 %, Temperature 40.0 °C	@Strain 1.48 %, Temperature 104 °F	ISO 11403-1 -2
	115.2 MPa	16710 psi	
	@Strain 1.485 %, Temperature 23.0 °C	@Strain 1.485 %, Temperature 73.4 °F	ISO 11403-1 -2
	127.31 MPa	18465 psi	
	@Strain 1.485 %, Temperature 0.000 °C	@Strain 1.485 %, Temperature 32.0 °F	ISO 11403-1 -2
	137.8 MPa	19980 psi	
	@Strain 1.50 %, Temperature -20.0 °C	@Strain 1.50 %, Temperature -4.00 °F	ISO 11403-1 -2
	146.5 MPa	21250 psi	
	@Strain 1.52 %, Temperature -40.0 °C	@Strain 1.52 %, Temperature -40.0 °F	ISO 11403-1 -2
	15.0 MPa	2180 psi	
	@Strain 0.130 %, Time 3600 sec	@Strain 0.130 %, Time 1.00 hour	isochronous; ISO 11403-1 -2
	15.0 MPa	2180 psi	
	@Strain 0.150 %, Time 36000 sec	@Strain 0.150 %, Time 10.0 hour	isochronous; ISO 11403-1 -2
	15.0 MPa	2180 psi	
	@Strain 0.170 %, Time 360000 sec	@Strain 0.170 %, Time 100 hour	isochronous; ISO 11403-1 -2

Mechanical Properties	Metric Pa	English	Comments
	@Strain 0.400 %, Time 3.60e+6 sec	@Strain 0.400 %, Time 1000 hour	isochronous; ISO 11403-1 -2
Elongation at Break	2.4 %	2.4 %	ISO 527-1/-2
Tensile Modulus	11.2 GPa	1620 ksi	ISO 527-1/-2
	4.165 GPa	604.1 ksi	ISO 11403-1 -2
	@Temperature 120 °C	@Temperature 248 °F	
	8.079 GPa	1172 ksi	ISO 11403-1 -2
	@Temperature 40.0 °C	@Temperature 104 °F	
	11.662 GPa	1691.4 ksi	ISO 11403-1 -2
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Flexural Strength	215 MPa	31200 psi	ISO 178
Secant Modulus	2.20 GPa	319 ksi	ISO 11403-1 -2
	@Strain 2.88 %, Temperature 100 °C	@Strain 2.88 %, Temperature 212 °F	
	2.69 GPa	391 ksi	ISO 11403-1 -2
	@Strain 2.16 %, Temperature 100 °C	@Strain 2.16 %, Temperature 212 °F	
	3.3469 GPa	485.43 ksi	ISO 11403-1 -2
	@Strain 1.45 %, Temperature 100 °C	@Strain 1.45 %, Temperature 212 °F	
	4.25 GPa	616 ksi	ISO 11403-1 -2
	@Strain 1.50 %, Temperature 80.0 °C	@Strain 1.50 %, Temperature 176 °F	
	4.3137 GPa	625.66 ksi	ISO 11403-1 -2
	@Strain 0.730 %, Temperature 100 °C	@Strain 0.730 %, Temperature 212 °F	
	5.215 GPa	756.4 ksi	ISO 11403-1 -2
	@Strain 0.200 %, Temperature 100 °C	@Strain 0.200 %, Temperature 212 °F	
	6.04 GPa	875 ksi	ISO 11403-1 -2
	@Strain 1.48 %, Temperature 40.0 °C	@Strain 1.48 %, Temperature 104 °F	
	6.20 GPa	899 ksi	ISO 11403-1 -2
	@Strain 0.250 %,	@Strain 0.250 %,	

Mechanical Properties	Temperature 80.0 °C Metric	Temperature 176 °F English	Comments
	7.76 GPa	1130 ksi	
	@Strain 1.485 %, Temperature 23.0 °C	@Strain 1.485 %, Temperature 73.4 °F	ISO 11403-1 -2
	8.57 GPa	1240 ksi	
	@Strain 1.485 %, Temperature 0.000 °C	@Strain 1.485 %, Temperature 32.0 °F	ISO 11403-1 -2
	8.70 GPa	1260 ksi	
	@Strain 0.260 %, Temperature 40.0 °C	@Strain 0.260 %, Temperature 104 °F	ISO 11403-1 -2
	9.18 GPa	1330 ksi	
	@Strain 1.50 %, Temperature -20.0 °C	@Strain 1.50 %, Temperature -4.00 °F	ISO 11403-1 -2
	9.64 GPa	1400 ksi	
	@Strain 1.52 %, Temperature -40.0 °C	@Strain 1.52 %, Temperature -40.0 °F	ISO 11403-1 -2
	11.4 GPa	1650 ksi	
	@Strain 0.265 %, Temperature 23.0 °C	@Strain 0.265 %, Temperature 73.4 °F	ISO 11403-1 -2
	11.5 GPa	1660 ksi	
	@Strain 0.265 %, Temperature 0.000 °C	@Strain 0.265 %, Temperature 32.0 °F	ISO 11403-1 -2
	12.1 GPa	1760 ksi	
	@Strain 0.215 %, Temperature -20.0 °C	@Strain 0.215 %, Temperature -4.00 °F	ISO 11403-1 -2
	12.5 GPa	1810 ksi	
	@Strain 0.225 %, Temperature -40.0 °C	@Strain 0.225 %, Temperature -40.0 °F	ISO 11403-1 -2
Izod Impact, Notched (ISO)	9.00 kJ/m ²	4.28 ft-lb/in ²	ISO 180/1A
	8.00 kJ/m ²	3.81 ft-lb/in ²	ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched (ISO)	40.0 kJ/m ²	19.0 ft-lb/in ²	ISO 180/1U

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