DuPont Performance Polymers Sorona® 3030GV NC010 Polytrimethylene Terephthalate (PTT) (Unverified Data**)

Category : Polymer , Renewable/Recycled Polymer , Thermoplastic , Polyester, TP , Polytrimethylene Terephthalate (PTT)

Material Notes:

Sorona® 3030GV NC010 is a 30% glass reinforced PTT resin containing 25% renewably sourced ingredients by weight (37% based on polymer only) with low warpage and superior strength, stiffness and surface appearance in a broad range of conditions.Information provided by DuPont Performance Polymers

Order this product through the following link:
http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Sorona-3030GV-NC010-Polytrimethylene-Terephthalate-PTT-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.56 g/cc	0.0564 lb/in³	ISO 1183
Water Absorption	0.080 % @Temperature 23.0 °C	0.080 % @Temperature 73.4 °F	Immersion 24h; ISO 62, Similar to
Linear Mold Shrinkage, Flow	0.0020 cm/cm @Thickness 2.00 mm	0.0020 in/in @Thickness 0.0787 in	Mold 80°C; ISO 294-4
	0.0020 cm/cm @Thickness 3.00 mm	0.0020 in/in @Thickness 0.118 in	Mold 80°C; ISO 294-4
	0.0030 cm/cm @Thickness 4.00 mm	0.0030 in/in @Thickness 0.157 in	Mold 80°C; ISO 294-4
Linear Mold Shrinkage, Transverse	0.0070 cm/cm @Thickness 2.00 mm	0.0070 in/in @Thickness 0.0787 in	Mold 80°C; ISO 294-4
	0.0070 cm/cm @Thickness 3.00 mm	0.0070 in/in @Thickness 0.118 in	Mold 80°C; ISO 294-4
	0.0090 cm/cm @Thickness 4.00 mm	0.0090 in/in @Thickness 0.157 in	Mold 80°C; ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	165 MPa @Temperature 23.0 °C	23900 psi @Temperature 73.4 °F	ISO 527
Elongation at Break	2.5 % @Temperature 23.0 °C	2.5 % @Temperature 73.4 °F	ISO 527
	11.0 GPa	1600 ksi	

Mechanical Properties	Metric	English	Comments
Tensile Modulus	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 527
Flexural Strength	245 MPa @Temperature 23.0 °C	35500 psi @Temperature 73.4 °F	ISO 178
Flexural Modulus	9.60 GPa @Temperature 23.0 °C	1390 ksi @Temperature 73.4 °F	ISO 178
Charpy Impact Unnotched	4.50 J/cm² @Temperature -30.0 °C	21.4 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eU
	5.00 J/cm² @Temperature 23.0 °C	23.8 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	0.900 J/cm² @Temperature -30.0 °C	4.28 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eA
	0.900 J/cm² @Temperature 23.0 °C	4.28 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	500 µm/m-°C @Temperature -40.0 - 23.0 °C	278 µin/in-°F @Temperature -40.0 - 73.4 °F	ISO 11359-1/-2
	500 µm/m-°C @Temperature 23.0 - 55.0 °C	278 µin/in-°F @Temperature 73.4 - 131 °F	ISO 11359-1/-2
	500 µm/m-°C @Temperature 55.0 - 160 °C	278 µin/in-°F @Temperature 131 - 320 °F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	67.0 µm/m-°C @Temperature -40.0 - 23.0 °C	37.2 µin/in-°F @Temperature -40.0 - 73.4 °F	ISO 11359-1/-2
	83.0 µm/m-°C @Temperature 23.0 - 55.0 °C	46.1 µin/in-°F @Temperature 73.4 - 131 °F	ISO 11359-1/-2
	120 µm/m-°C @Temperature 55.0 - 160 °C	66.7 µin/in-°F @Temperature 131 - 320 °F	ISO 11359-1/-2
Melting Point	227 °C	441 °F	10°C/min; ISO 11357-1/-3

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (67 psi)	225 °C	439 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	210 °C	410 °F	ISO 75-1/-2
Flammability, UL94	HB @Thickness 0.750 mm	HB @Thickness 0.0295 in	IEC 60695-11-10
	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	IEC 60695-11-10
	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	IEC 60695-11-10
	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	UL94
	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	UL94
	HB @Thickness 0.750 mm	HB @Thickness 0.0295 in	UL94
Oxygen Index	20 %	20 %	ISO 4589-1/-2
Glow Wire Test	675 °C @Thickness 0.850 mm	1250 °F @Thickness 0.0335 in	IEC 60695-2-12
	675 °C @Thickness 1.50 mm	1250 °F @Thickness 0.0591 in	IEC 60695-2-12
	700 °C @Thickness 1.50 mm	1290 °F @Thickness 0.0591 in	Ignition; IEC 60695-2-13
	700 °C @Thickness 0.850 mm	1290 °F @Thickness 0.0335 in	Ignition; IEC 60695-2-13
	800 °C @Thickness 3.00 mm	1470 °F @Thickness 0.118 in	IEC 60695-2-12
	825 °C @Thickness 3.00 mm	1520 °F @Thickness 0.118 in	Ignition; IEC 60695-2-13

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.00e+16 ohm-cm	2.00e+16 ohm-cm	IEC 60093

Electrical Properties	Metric	English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Surface Resistance	8.00e+13 ohm @Temperature 23.0 °C	8.00e+13 ohm @Temperature 73.4 °F	IEC 60093
Dielectric Constant	4.0 @Frequency 1.00e+6 Hz, Temperature 23.0 °C	4.0 @Frequency 1.00e+6 Hz, Temperature 73.4 °F	IEC 60250
	4.2 @Frequency 100 Hz, Temperature 23.0 °C	4.2 @Frequency 100 Hz, Temperature 73.4 °F	IEC 60250
	4.2 @Frequency 1000 Hz, Temperature 23.0 °C	4.2 @Frequency 1000 Hz, Temperature 73.4 °F	IEC 60250
Dielectric Strength	28.0 kV/mm @Thickness 2.00 mm, Temperature 90.0 °C	711 kV/in @Thickness 0.0787 in, Temperature 194 °F	IEC 60243-1
	29.0 kV/mm @Thickness 2.00 mm, Temperature 23.0 °C	737 kV/in @Thickness 0.0787 in, Temperature 73.4 °F	IEC 60243-1
	38.0 kV/mm @Thickness 1.00 mm, Temperature 23.0 °C	965 kV/in @Thickness 0.0394 in, Temperature 73.4 °F	IEC 60243-1
	38.0 kV/mm @Thickness 1.00 mm, Temperature 90.0 °C	965 kV/in @Thickness 0.0394 in, Temperature 194 °F	IEC 60243-1
Dissipation Factor	0.0012 @Frequency 100 Hz, Temperature 23.0 °C	0.0012 @Frequency 100 Hz, Temperature 73.4 °F	IEC 60250
	0.0027 @Frequency 1000 Hz, Temperature 23.0 °C	0.0027 @Frequency 1000 Hz, Temperature 73.4 °F	IEC 60250
	0.0155 @Frequency 1.00e+6 Hz, Temperature 23.0 °C	0.0155 @Frequency 1.00e+6 Hz, Temperature 73.4 °F	IEC 60250
Comparative Tracking Index	300 V @Temperature 23.0 °C	300 V @Temperature 73.4 °F	IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	260 °C	500 °F	Optimum
	250 - 270 °C	482 - 518 °F	
Mold Temperature	80.0 - 110 °C	176 - 230 °F	
	100 °C	212 °F	optimum
Drying Temperature	120 °C	248 °F	
Dry Time	4.00 hour	4.00 hour	
Moisture Content	<= 0.020 %	<= 0.020 %	

Descriptive Properties	Value	Comments
Appearance	Natural Color	
Forms	Pellets	
Generic	Polytrimethylene Terephthalate (PTT)	
Material Status	Current	
Part Marking Code	>PTT-GF30<	ISO 11469
Processing Method	Injection Molding	
Product Category	Glass Reinforced Resins	
	Renewably Sourced Resins	
Region Available - Global	Yes	
Resin Identification	PTT-GF30	ISO 1043
RoHS Compliance	Contact Manufacturer	

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