

DuPont Performance Polymers Sorona® 3030GV BK001 Polytrimethylene Terephthalate (PTT) (Unverified Data**)

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

Material Notes:

Sorona® 3030GV BK001 is a 30% glass reinforced black 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-BK001-Polytrimethylene-Terephthalate-PTT-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.56 g/cc	0.0564 lb/in ³	ISO 1183
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	Mold 80°C; ISO 294-4
	@Thickness 3.00 mm	@Thickness 0.118 in	
	0.0020 cm/cm	0.0020 in/in	
Linear Mold Shrinkage, Transverse	@Thickness 2.00 mm	@Thickness 0.0787 in	Mold 80°C; ISO 294-4
	0.0030 cm/cm	0.0030 in/in	
	@Thickness 4.00 mm	@Thickness 0.157 in	
Linear Mold Shrinkage, Transverse	0.0070 cm/cm	0.0070 in/in	Mold 80°C; ISO 294-4
	@Thickness 3.00 mm	@Thickness 0.118 in	
	0.0080 cm/cm	0.0080 in/in	
Linear Mold Shrinkage, Transverse	@Thickness 2.00 mm	@Thickness 0.0787 in	Mold 80°C; ISO 294-4
	0.0090 cm/cm	0.0090 in/in	
	@Thickness 4.00 mm	@Thickness 0.157 in	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	142 MPa	20600 psi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	2.0 %	2.0 %	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus	10.6 GPa	1540 ksi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	215 MPa	31200 psi	

Flexural Strength Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ISO 178 Comments
Flexural Modulus	9.40 GPa	1360 ksi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	4.50 J/cm²	21.4 ft-lb/in²	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.700 J/cm²	3.33 ft-lb/in²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
Melting Point	227 °C	441 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	226 °C	439 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	205 °C	401 °F	ISO 75-1/-2
Flammability, UL94	HB	HB	UL94
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	HB	HB	UL94
	@Thickness 3.00 mm	@Thickness 0.118 in	
	HB	HB	UL94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	IEC 60695-11-10
	@Thickness 3.00 mm	@Thickness 0.118 in	
	HB	HB	IEC 60695-11-10
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	IEC 60695-11-10
	@Thickness 0.750 mm	@Thickness 0.0295 in	
Oxygen Index	21 %	21 %	ISO 4589-1/-2
Glow Wire Test	675 °C	1250 °F	IEC 60695-2-12
	@Thickness 0.850 mm	@Thickness 0.0335 in	
	675 °C	1250 °F	IEC 60695-2-12
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	700 °C	1290 °F	

Thermal Properties	Metric @ Thickness 1.50 mm	English @ Thickness 0.0591 in	Comments Ignition: IEC 60695-2-13
	700 °C	1290 °F	Ignition; IEC 60695-2-13
	@Thickness 0.850 mm	@Thickness 0.0335 in	
	800 °C	1470 °F	IEC 60695-2-12
	@Thickness 3.00 mm	@Thickness 0.118 in	
	825 °C	1520 °F	Ignition; IEC 60695-2-13
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.00e+16 ohm-cm	2.00e+16 ohm-cm	IEC 60093
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Surface Resistance	3.00e+14 ohm	3.00e+14 ohm	IEC 60093
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Dielectric Constant	4.1	4.1	IEC 60250
	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@Frequency 1.00e+6 Hz, Temperature 73.4 °F	
	4.3	4.3	IEC 60250
	@Frequency 1000 Hz, Temperature 23.0 °C	@Frequency 1000 Hz, Temperature 73.4 °F	
	4.3	4.3	IEC 60250
	@Frequency 100 Hz, Temperature 23.0 °C	@Frequency 100 Hz, Temperature 73.4 °F	
Dielectric Strength	22.0 kV/mm	559 kV/in	IEC 60243-1
	@Thickness 2.00 mm, Temperature 90.0 °C	@Thickness 0.0787 in, Temperature 194 °F	
	24.0 kV/mm	610 kV/in	IEC 60243-1
	@Thickness 2.00 mm, Temperature 23.0 °C	@Thickness 0.0787 in, Temperature 73.4 °F	
	30.0 kV/mm	762 kV/in	IEC 60243-1
	@Thickness 1.00 mm, Temperature 90.0 °C	@Thickness 0.0394 in, Temperature 194 °F	
	32.0 kV/mm	813 kV/in	IEC 60243-1
	@Thickness 1.00 mm, Temperature 23.0 °C	@Thickness 0.0394 in, Temperature 73.4 °F	
	0.0015	0.0015	

Electrical Properties	Metric	English	Comments
	@Frequency 100 Hz, Temperature 23.0 °C	@Frequency 100 Hz, Temperature 73.4 °F	
	0.0027	0.0027	IEC 60250
	@Frequency 1000 Hz, Temperature 23.0 °C	@Frequency 1000 Hz, Temperature 73.4 °F	
	0.0155	0.0155	IEC 60250
	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@Frequency 1.00e+6 Hz, Temperature 73.4 °F	
Comparative Tracking Index	300 V	300 V	IEC 60112
	@Temperature 23.0 °C	@Temperature 73.4 °F	

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	Black 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

Descriptive Properties	Value	Manufacturer	Comments
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