

DuPont Performance Polymers Sorona® 3015G NC010 Polytrimethylene Terephthalate (PTT) (Unverified Data**)&

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

Material Notes:

15% Glass Reinforced Polytrimethylene Terephthalate with Resin Made from Bio-PDO Sorona 3015G NC010 is a 15% glass reinforced PTT resin containing 31% renewably sourced ingredients by weight (37% based on polymer only) with good strength stiffness and Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Sorona-3015G-NC010-Polytrimethylene-Terephthalate-PTT-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.25 g/cc	0.0452 lb/in ³	
	1.40 g/cc	0.0506 lb/in ³	ISO 1183
Water Absorption at Saturation	0.080 %	0.080 %	Immersion 24h; ASTM D570
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.0070 cm/cm	0.0070 in/in	ISO 294-4 2577
Melt Flow	13 g/10 min	13 g/10 min	cm ³ /10min; ISO 1133
	@Load 2.16 kg, Temperature 250 °C	@Load 4.76 lb, Temperature 482 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	125 MPa	18100 psi	ISO 527-1/-2
Tensile Stress	3.9278 MPa	569.68 psi	ISO 11403-1 -2
	@Strain 0.200 %, Temperature 150 °C	@Strain 0.200 %, Temperature 302 °F	
	10.886 MPa	1578.9 psi	ISO 11403-1 -2
	@Strain 0.600 %, Temperature 150 °C	@Strain 0.600 %, Temperature 302 °F	
	15.22 MPa	2207 psi	ISO 11403-1 -2
	@Strain 0.900 %, Temperature 150 °C	@Strain 0.900 %, Temperature 302 °F	
	18.885 MPa	2739.0 psi	ISO 11403-1 -2
	@Strain 1.20 %, Temperature 150 °C	@Strain 1.20 %, Temperature 302 °F	
	30.234 MPa	4385.1 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 0.500 %, Temperature 23.0 °C	@Strain 0.500 %, Temperature 73.4 °F	ISO 11403-1 -2
	30.725 MPa	4456.3 psi	
	@Strain 0.500 %, Temperature 0.000 °C	@Strain 0.500 %, Temperature 32.0 °F	ISO 11403-1 -2
	41.156 MPa	5969.2 psi	
	@Strain 0.700 %, Temperature 40.0 °C	@Strain 0.700 %, Temperature 104 °F	ISO 11403-1 -2
	44.857 MPa	6506.0 psi	
	@Strain 0.700 %, Temperature -40.0 °C	@Strain 0.700 %, Temperature -40.0 °F	ISO 11403-1 -2
	56.918 MPa	8255.3 psi	
	@Strain 1.00 %, Temperature 40.0 °C	@Strain 1.00 %, Temperature 104 °F	ISO 11403-1 -2
	57.0 MPa	8270 psi	
	@Strain 1.00 %, Temperature 23.0 °C	@Strain 1.00 %, Temperature 73.4 °F	ISO 11403-1 -2
	63.134 MPa	9156.8 psi	
	@Strain 1.00 %, Temperature -40.0 °C	@Strain 1.00 %, Temperature -40.0 °F	ISO 11403-1 -2
	64.435 MPa	9345.5 psi	
	@Strain 1.10 %, Temperature 0.000 °C	@Strain 1.10 %, Temperature 32.0 °F	ISO 11403-1 -2
	70.223 MPa	10185 psi	
	@Strain 1.30 %, Temperature 40.0 °C	@Strain 1.30 %, Temperature 104 °F	ISO 11403-1 -2
	71.233 MPa	10331 psi	
	@Strain 1.30 %, Temperature 23.0 °C	@Strain 1.30 %, Temperature 73.4 °F	ISO 11403-1 -2
	79.772 MPa	11570 psi	
	@Strain 1.40 %, Temperature 0.000 °C	@Strain 1.40 %, Temperature 32.0 °F	ISO 11403-1 -2
	80.407 MPa	11662 psi	
	@Strain 1.30 %, Temperature -40.0 °C	@Strain 1.30 %, Temperature -40.0 °F	ISO 11403-1 -2
	81.404 MPa	11807 psi	
	@Strain 1.60 %, Temperature 40.0 °C	@Strain 1.60 %, Temperature 104 °F	ISO 11403-1 -2

Mechanical Properties	Metric MPa	English ksi	Comments
	@Strain 1.60 %, Temperature 23.0 °C	@Strain 1.60 %, Temperature 73.4 °F	ISO 11403-1 -2
	93.907 MPa	13620 psi	
	@Strain 1.70 %, Temperature 0.000 °C	@Strain 1.70 %, Temperature 32.0 °F	ISO 11403-1 -2
	96.686 MPa	14023 psi	
	@Strain 1.60 %, Temperature -40.0 °C	@Strain 1.60 %, Temperature -40.0 °F	ISO 11403-1 -2
Elongation at Break	3.0 %	3.0 %	ISO 527-1/-2
Tensile Modulus	6.50 GPa	943 ksi	ISO 527-1/-2
Flexural Strength	190 MPa	27600 psi	ISO 178
Flexural Modulus	5.80 GPa	841 ksi	ISO 178
Secant Modulus	1.4435 GPa	209.37 ksi	
	@Strain 3.20 %, Temperature 100 °C	@Strain 3.20 %, Temperature 212 °F	ISO 11403-1 -2
	1.56 GPa	227 ksi	
	@Strain 3.50 %, Temperature 80.0 °C	@Strain 3.50 %, Temperature 176 °F	ISO 11403-1 -2
	1.67 GPa	243 ksi	
	@Strain 2.40 %, Temperature 100 °C	@Strain 2.40 %, Temperature 212 °F	ISO 11403-1 -2
	1.80 GPa	262 ksi	
	@Strain 2.70 %, Temperature 80.0 °C	@Strain 2.70 %, Temperature 176 °F	ISO 11403-1 -2
	1.95 GPa	283 ksi	
	@Strain 1.60 %, Temperature 100 °C	@Strain 1.60 %, Temperature 212 °F	ISO 11403-1 -2
	2.07 GPa	300 ksi	
	@Strain 1.90 %, Temperature 80.0 °C	@Strain 1.90 %, Temperature 176 °F	ISO 11403-1 -2
	2.29 GPa	332 ksi	
	@Strain 0.800 %, Temperature 100 °C	@Strain 0.800 %, Temperature 212 °F	ISO 11403-1 -2
	2.41 GPa	350 ksi	
	@Strain 1.10 %,	@Strain 1.10 %,	ISO 11403-1 -2

Mechanical Properties	Temperature 80.0 °C	Temperature 176 °F	Comments
	Metric 2.4803 GPa	English 359.83 ksi	
	@Strain 0.100 %, Temperature 100 °C	@Strain 0.100 %, Temperature 212 °F	ISO 11403-1 -2
	2.6388 GPa	382.73 ksi	
	@Strain 0.500 %, Temperature 80.0 °C	@Strain 0.500 %, Temperature 176 °F	ISO 11403-1 -2
	4.16 GPa	604 ksi	
	@Strain 2.40 %, Temperature 40.0 °C	@Strain 2.40 %, Temperature 104 °F	ISO 11403-1 -2
	4.67 GPa	677 ksi	
	@Strain 2.40 %, Temperature 23.0 °C	@Strain 2.40 %, Temperature 73.4 °F	ISO 11403-1 -2
	4.98 GPa	722 ksi	
	@Strain 1.70 %, Temperature 40.0 °C	@Strain 1.70 %, Temperature 104 °F	ISO 11403-1 -2
	5.05 GPa	733 ksi	
	@Strain 2.40 %, Temperature 0.000 °C	@Strain 2.40 %, Temperature 32.0 °F	ISO 11403-1 -2
	5.23 GPa	758 ksi	
	@Strain 1.70 %, Temperature 23.0 °C	@Strain 1.70 %, Temperature 73.4 °F	ISO 11403-1 -2
	5.40 GPa	783 ksi	
	@Strain 1.30 %, Temperature 40.0 °C	@Strain 1.30 %, Temperature 104 °F	ISO 11403-1 -2
	5.46 GPa	792 ksi	
	@Strain 1.80 %, Temperature 0.000 °C	@Strain 1.80 %, Temperature 32.0 °F	ISO 11403-1 -2
	5.48 GPa	795 ksi	
	@Strain 1.30 %, Temperature 23.0 °C	@Strain 1.30 %, Temperature 73.4 °F	ISO 11403-1 -2
	5.698 GPa	826.4 ksi	
	@Strain 1.40 %, Temperature 0.000 °C	@Strain 1.40 %, Temperature 32.0 °F	ISO 11403-1 -2
	5.78 GPa	839 ksi	
	@Strain 0.900 %, Temperature 40.0 °C	@Strain 0.900 %, Temperature 104 °F	ISO 11403-1 -2
	5.80 GPa	842 ksi	

Mechanical Properties	Metric	English	ISO 11403-1 -2 Comments
	@Strain 2.10 %, Temperature -40.0 °C	@Strain 2.10 %, Temperature -40.0 °F	
	5.813 GPa	843.1 ksi	
	@Strain 0.900 %, Temperature 23.0 °C	@Strain 0.900 %, Temperature 73.4 °F	ISO 11403-1 -2
	5.9006 GPa	855.82 ksi	
	@Strain 1.00 %, Temperature 0.000 °C	@Strain 1.00 %, Temperature 32.0 °F	ISO 11403-1 -2
	6.00 GPa	870 ksi	
	@Strain 1.70 %, Temperature -40.0 °C	@Strain 1.70 %, Temperature -40.0 °F	ISO 11403-1 -2
	6.05 GPa	877 ksi	
	@Strain 0.600 %, Temperature 40.0 °C	@Strain 0.600 %, Temperature 104 °F	ISO 11403-1 -2
	6.19 GPa	897 ksi	
	@Strain 1.30 %, Temperature -40.0 °C	@Strain 1.30 %, Temperature -40.0 °F	ISO 11403-1 -2
	6.20 GPa	899 ksi	
	@Strain 0.100 %, Temperature 23.0 °C	@Strain 0.100 %, Temperature 73.4 °F	ISO 11403-1 -2
	6.3026 GPa	914.13 ksi	
	@Strain 0.100 %, Temperature 0.000 °C	@Strain 0.100 %, Temperature 32.0 °F	ISO 11403-1 -2
	6.34 GPa	920 ksi	
	@Strain 0.900 %, Temperature -40.0 °C	@Strain 0.900 %, Temperature -40.0 °F	ISO 11403-1 -2
	6.881 GPa	998.0 ksi	
	@Strain 0.200 %, Temperature -40.0 °C	@Strain 0.200 %, Temperature -40.0 °F	ISO 11403-1 -2
Charpy Impact Unnotched	2.50 J/cm²	11.9 ft-lb/in²	ISO 179/1eU
	3.00 J/cm²	14.3 ft-lb/in²	
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	0.550 J/cm²	2.62 ft-lb/in²	ISO 179/1eA
	0.600 J/cm²	2.86 ft-lb/in²	
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179/1eA

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