

DuPont Performance Polymers Rynite® 530 NC010 Polyethylene Terephthalate (PET) (Unverified Data**)

Category : Polymer , Thermoplastic , Polyester, TP , Polyethylene Terephthalate (PET) , Polyethylene Terephthalate (PET), 30% Glass Reinforced

Material Notes:

30% Glass Reinforced Polyethylene Terephthalate Rynite 530 NC010 is a 30% glass fiber reinforced modified polyethylene terephthalate resin with an outstanding balance of strength stiffness and toughness excellent electrical properties surface appearance Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Rynite-530-NC010-Polyethylene-Terephthalate-PET-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.56 g/cc	1.56 g/cc	ASTM D792
Density	1.56 g/cc	0.0564 lb/in ³	ISO 1183
Water Absorption	0.70 % @Thickness 2.00 mm	0.70 % @Thickness 0.0787 in	Sim. to ISO 62
Moisture Absorption	0.200 % @Thickness 2.00 mm	0.200 % @Thickness 0.0787 in	Sim. to ISO 62
Viscosity	44000 cP @Shear Rate 5000 1/s, Temperature 300 °C	44000 cP @Shear Rate 5000 1/s, Temperature 572 °F	ISO 11403-1 -2
	60000 cP @Shear Rate 5000 1/s, Temperature 290 °C	60000 cP @Shear Rate 5000 1/s, Temperature 554 °F	ISO 11403-1 -2
	82000 cP @Shear Rate 5000 1/s, Temperature 280 °C	82000 cP @Shear Rate 5000 1/s, Temperature 536 °F	ISO 11403-1 -2
	130000 cP @Shear Rate 500 1/s, Temperature 300 °C	130000 cP @Shear Rate 500 1/s, Temperature 572 °F	ISO 11403-1 -2
	174000 cP @Shear Rate 500 1/s, Temperature 290 °C	174000 cP @Shear Rate 500 1/s, Temperature 554 °F	ISO 11403-1 -2
	232000 cP @Shear Rate 500 1/s, Temperature 280 °C	232000 cP @Shear Rate 500 1/s, Temperature 536 °F	ISO 11403-1 -2

Linear Mold Shrinkage, Flow Physical Properties	0.0020 cm/cm Metric	0.0020 in/in English	ISO 294-4 2577 Comments
Linear Mold Shrinkage, Transverse	0.0080 cm/cm	0.0080 in/in	ISO 294-4 2577
Melt Flow	5.0 g/10 min @Load 2.16 kg, Temperature 280 °C	5.0 g/10 min @Load 4.76 lb, Temperature 536 °F	cm ³ /10min; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	100	100	ISO 2039-2
Hardness, Rockwell R	120	120	ISO 2039-2
Tensile Strength at Break	158 MPa	22900 psi	ISO 527-1/-2
Tensile Stress	16.7 MPa @Strain 0.460 %, Temperature 150 °C	2420 psi @Strain 0.460 %, Temperature 302 °F	ISO 11403-1 -2
	23.95 MPa @Strain 0.490 %, Temperature 90.0 °C	3474 psi @Strain 0.490 %, Temperature 194 °F	ISO 11403-1 -2
	25.5 MPa @Strain 0.260 %, Temperature 40.0 °C	3700 psi @Strain 0.260 %, Temperature 104 °F	ISO 11403-1 -2
	27.0 MPa @Strain 0.250 %, Temperature 23.0 °C	3920 psi @Strain 0.250 %, Temperature 73.4 °F	ISO 11403-1 -2
	27.4 MPa @Strain 0.240 %, Temperature 0.000 °C	3970 psi @Strain 0.240 %, Temperature 32.0 °F	ISO 11403-1 -2
	28.9 MPa @Strain 0.230 %, Temperature -40.0 °C	4190 psi @Strain 0.230 %, Temperature -40.0 °F	ISO 11403-1 -2
	45.0 MPa @Strain 1.84 %, Temperature 150 °C	6530 psi @Strain 1.84 %, Temperature 302 °F	ISO 11403-1 -2
	57.0 MPa @Strain 3.21 %, Temperature 150 °C	8270 psi @Strain 3.21 %, Temperature 302 °F	ISO 11403-1 -2
	62.0 MPa @Strain 4.59 %,	8990 psi @Strain 4.59 %,	ISO 11403-1 -2

Mechanical Properties	Temperature 150 °C Metric	Temperature 302 °F English	Comments
	62.15 MPa	9014 psi	
	@Strain 1.90 %, Temperature 90.0 °C	@Strain 1.90 %, Temperature 194 °F	ISO 11403-1 -2
	78.2 MPa	11300 psi	
	@Strain 3.30 %, Temperature 90.0 °C	@Strain 3.30 %, Temperature 194 °F	ISO 11403-1 -2
	82.65 MPa	11990 psi	
	@Strain 4.71 %, Temperature 90.0 °C	@Strain 4.71 %, Temperature 194 °F	ISO 11403-1 -2
	82.95 MPa	12030 psi	
	@Strain 1.04 %, Temperature 40.0 °C	@Strain 1.04 %, Temperature 104 °F	ISO 11403-1 -2
	90.0 MPa	13100 psi	
	@Strain 0.970 %, Temperature 23.0 °C	@Strain 0.970 %, Temperature 73.4 °F	ISO 11403-1 -2
	97.0 MPa	14100 psi	
	@Strain 0.950 %, Temperature 0.000 °C	@Strain 0.950 %, Temperature 32.0 °F	ISO 11403-1 -2
	105 MPa	15200 psi	
	@Strain 0.940 %, Temperature -40.0 °C	@Strain 0.940 %, Temperature -40.0 °F	ISO 11403-1 -2
	117.1 MPa	16980 psi	
	@Strain 1.82 %, Temperature 40.0 °C	@Strain 1.82 %, Temperature 104 °F	ISO 11403-1 -2
	131.5 MPa	19070 psi	
	@Strain 2.60 %, Temperature 40.0 °C	@Strain 2.60 %, Temperature 104 °F	ISO 11403-1 -2
	134 MPa	19400 psi	
	@Strain 1.69 %, Temperature 23.0 °C	@Strain 1.69 %, Temperature 73.4 °F	ISO 11403-1 -2
	151 MPa	21900 psi	
	@Strain 1.67 %, Temperature 0.000 °C	@Strain 1.67 %, Temperature 32.0 °F	ISO 11403-1 -2
	155 MPa	22500 psi	
	@Strain 2.42 %, Temperature 23.0 °C	@Strain 2.42 %, Temperature 73.4 °F	ISO 11403-1 -2
	164 MPa	23800 psi	

Mechanical Properties	Metric	English	ISO 11403-1 -2 Comments
	@Strain 1.60 %, Temperature -40.0 °C	@Strain 1.60 %, Temperature -40.0 °F	
	185 MPa	26800 psi	
	@Strain 2.38 %, Temperature 0.000 °C	@Strain 2.38 %, Temperature 32.0 °F	ISO 11403-1 -2
	211 MPa	30600 psi	
	@Strain 2.29 %, Temperature -40.0 °C	@Strain 2.29 %, Temperature -40.0 °F	ISO 11403-1 -2
	20.0 MPa	2900 psi	
	@Strain 0.222 %, Time 3.60e+6 sec	@Strain 0.222 %, Time 1000 hour	isochronous; ISO 11403-1 -2
	20.0 MPa	2900 psi	
	@Strain 0.190 %, Time 36000 sec	@Strain 0.190 %, Time 10.0 hour	isochronous; ISO 11403-1 -2
	20.0 MPa	2900 psi	
	@Strain 0.201 %, Time 360000 sec	@Strain 0.201 %, Time 100 hour	isochronous; ISO 11403-1 -2
	20.0 MPa	2900 psi	
	@Strain 0.247 %, Time 1.80e+7 sec	@Strain 0.247 %, Time 5000 hour	isochronous; ISO 11403-1 -2
	20.0 MPa	2900 psi	
	@Strain 0.260 %, Time 3.60e+7 sec	@Strain 0.260 %, Time 10000 hour	isochronous; ISO 11403-1 -2
	20.0 MPa	2900 psi	
	@Strain 0.183 %, Time 3600 sec	@Strain 0.183 %, Time 1.00 hour	isochronous; ISO 11403-1 -2
	60.0 MPa	8700 psi	
	@Strain 0.574 %, Time 3600 sec	@Strain 0.574 %, Time 1.00 hour	isochronous; ISO 11403-1 -2
	60.0 MPa	8700 psi	
	@Strain 0.831 %, Time 3.60e+7 sec	@Strain 0.831 %, Time 10000 hour	isochronous; ISO 11403-1 -2
	60.0 MPa	8700 psi	
	@Strain 0.785 %, Time 1.80e+7 sec	@Strain 0.785 %, Time 5000 hour	isochronous; ISO 11403-1 -2
	60.0 MPa	8700 psi	
	@Strain 0.638 %, Time 360000 sec	@Strain 0.638 %, Time 100 hour	isochronous; ISO 11403-1 -2

Mechanical Properties	Metric ¹ Pa	English ¹	Comments
	@Strain 0.599 %, Time 36000 sec	@Strain 0.599 %, Time 10.0 hour	isochronous; ISO 11403-1 -2
	60.0 MPa	8700 psi	
	@Strain 0.709 %, Time 3.60e+6 sec	@Strain 0.709 %, Time 1000 hour	isochronous; ISO 11403-1 -2
Elongation at Break	2.5 %	2.5 %	ISO 527-1/-2
Tensile Modulus	11.0 GPa	1600 ksi	ISO 527-1/-2
Flexural Strength	230 MPa	33400 psi	ISO 178
Flexural Modulus	8.95 GPa	1300 ksi	ISO 178
Shear Modulus	0.548 GPa	79.5 ksi	Dynamic; ISO 11403-1 -2
	@Temperature 160 °C	@Temperature 320 °F	
	0.637 GPa	92.4 ksi	Dynamic; ISO 11403-1 -2
	@Temperature 120 °C	@Temperature 248 °F	
	1.33 GPa	193 ksi	Dynamic; ISO 11403-1 -2
	@Temperature 70.0 °C	@Temperature 158 °F	
	2.101 GPa	304.7 ksi	Dynamic; ISO 11403-1 -2
	@Temperature 20.0 °C	@Temperature 68.0 °F	
	2.288 GPa	331.9 ksi	Dynamic; ISO 11403-1 -2
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	2.487 GPa	360.7 ksi	Dynamic; ISO 11403-1 -2
	@Temperature -50.0 °C	@Temperature -58.0 °F	
Shear Strength	0.0650 MPa	9.43 psi	ISO 11403-1 -2
	@Shear Rate 500 1/s, Temperature 300 °C	@Shear Rate 500 1/s, Temperature 572 °F	
	0.0870 MPa	12.6 psi	ISO 11403-1 -2
	@Shear Rate 500 1/s, Temperature 290 °C	@Shear Rate 500 1/s, Temperature 554 °F	
	0.116 MPa	16.8 psi	ISO 11403-1 -2
	@Shear Rate 500 1/s, Temperature 280 °C	@Shear Rate 500 1/s, Temperature 536 °F	
Secant Modulus	5.97 GPa	865 ksi	ISO 11403-1 -2
	@Strain 2.08 %	@Strain 2.08 %	

Mechanical Properties	Temperature 40.0 °C Metric	Temperature 104 °F English	Comments
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