

DuPont Performance Polymers Rynite® 545 NC010 Polyethylene Terephthalate (PET) (Unverified Data**)

Category : Polymer , Thermoplastic , Polyester, TP , Polyethylene Terephthalate (PET) , Polyethylene Terephthalate (PET), 50% Glass Reinforced

Material Notes:

45% Glass Reinforced Polyethylene Terephthalate Rynite 545 NC010 is a 45% glass reinforced modified polyethylene terephthalate with greater strength and stiffness excellent dimensional stability and creep resistance. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Rynite-545-NC010-Polyethylene-Terephthalate-PET-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.69 g/cc	0.0611 lb/in ³	ISO 1183
Water Absorption	0.62 % @Thickness 2.00 mm	0.62 % @Thickness 0.0787 in	Sim. to ISO 62
Moisture Absorption	0.140 % @Thickness 2.00 mm	0.140 % @Thickness 0.0787 in	Sim. to ISO 62
Viscosity	43000 cP @Shear Rate 5000 1/s, Temperature 305 °C	43000 cP @Shear Rate 5000 1/s, Temperature 581 °F	ISO 11403-1 -2
	55000 cP @Shear Rate 5000 1/s, Temperature 295 °C	55000 cP @Shear Rate 5000 1/s, Temperature 563 °F	ISO 11403-1 -2
	70000 cP @Shear Rate 5000 1/s, Temperature 285 °C	70000 cP @Shear Rate 5000 1/s, Temperature 545 °F	ISO 11403-1 -2
	139000 cP @Shear Rate 500 1/s, Temperature 305 °C	139000 cP @Shear Rate 500 1/s, Temperature 581 °F	ISO 11403-1 -2
	175000 cP @Shear Rate 500 1/s, Temperature 295 °C	175000 cP @Shear Rate 500 1/s, Temperature 563 °F	ISO 11403-1 -2
	223000 cP @Shear Rate 500 1/s, Temperature 285 °C	223000 cP @Shear Rate 500 1/s, Temperature 545 °F	ISO 11403-1 -2
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.0080 cm/cm	0.0080 in/in	ISO 294-4 2577

Physical Properties	2.5 v/10 min Metric	2.5 v/10 min English	Comments
Melt Flow	@Load 2.16 kg, Temperature 280 °C	@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	182 MPa	26400 psi	ISO 527-1/-2
Tensile Stress	23.4 MPa	3390 psi	ISO 11403-1 -2
	@Strain 0.520 %, Temperature 150 °C	@Strain 0.520 %, Temperature 302 °F	
	30.7 MPa	4450 psi	ISO 11403-1 -2
	@Strain 0.460 %, Temperature 90.0 °C	@Strain 0.460 %, Temperature 194 °F	
	34.7 MPa	5030 psi	ISO 11403-1 -2
	@Strain 0.190 %, Temperature 0.000 °C	@Strain 0.190 %, Temperature 32.0 °F	
	35.0 MPa	5080 psi	ISO 11403-1 -2
	@Strain 0.220 %, Temperature 40.0 °C	@Strain 0.220 %, Temperature 104 °F	
	37.6 MPa	5450 psi	ISO 11403-1 -2
	@Strain 0.200 %, Temperature -40.0 °C	@Strain 0.200 %, Temperature -40.0 °F	
	50.7 MPa	7350 psi	ISO 11403-1 -2
	@Strain 2.07 %, Temperature 150 °C	@Strain 2.07 %, Temperature 302 °F	
	61.3 MPa	8890 psi	ISO 11403-1 -2
	@Strain 3.63 %, Temperature 150 °C	@Strain 3.63 %, Temperature 302 °F	
	68.5 MPa	9940 psi	ISO 11403-1 -2
	@Strain 5.19 %, Temperature 150 °C	@Strain 5.19 %, Temperature 302 °F	
	72.5 MPa	10500 psi	ISO 11403-1 -2
	@Strain 0.500 %, Temperature 23.0 °C	@Strain 0.500 %, Temperature 73.4 °F	
	75.6 MPa	11000 psi	ISO 11403-1 -2
	@Strain 1.84 %,	@Strain 1.84 %,	

Mechanical Properties	Temperature 90.0 °C Metric	Temperature 194 °F English	Comments
	92.0 MPa	13300 psi	
	@Strain 3.22 %, Temperature 90.0 °C	@Strain 3.22 %, Temperature 194 °F	ISO 11403-1 -2
	99.5 MPa	14400 psi	
	@Strain 4.61 %, Temperature 90.0 °C	@Strain 4.61 %, Temperature 194 °F	ISO 11403-1 -2
	110 MPa	16000 psi	
	@Strain 0.900 %, Temperature 40.0 °C	@Strain 0.900 %, Temperature 104 °F	ISO 11403-1 -2
	120 MPa	17400 psi	
	@Strain 0.760 %, Temperature 0.000 °C	@Strain 0.760 %, Temperature 32.0 °F	ISO 11403-1 -2
	135 MPa	19600 psi	
	@Strain 0.810 %, Temperature -40.0 °C	@Strain 0.810 %, Temperature -40.0 °F	ISO 11403-1 -2
	147 MPa	21300 psi	
	@Strain 1.57 %, Temperature 40.0 °C	@Strain 1.57 %, Temperature 104 °F	ISO 11403-1 -2
	162 MPa	23500 psi	
	@Strain 2.24 %, Temperature 40.0 °C	@Strain 2.24 %, Temperature 104 °F	ISO 11403-1 -2
	179 MPa	26000 psi	
	@Strain 1.33 %, Temperature 0.000 °C	@Strain 1.33 %, Temperature 32.0 °F	ISO 11403-1 -2
	180 MPa	26100 psi	
	@Strain 2.00 %, Temperature 23.0 °C	@Strain 2.00 %, Temperature 73.4 °F	ISO 11403-1 -2
	209 MPa	30300 psi	
	@Strain 1.41 %, Temperature -40.0 °C	@Strain 1.41 %, Temperature -40.0 °F	ISO 11403-1 -2
	213 MPa	30900 psi	
	@Strain 1.90 %, Temperature 0.000 °C	@Strain 1.90 %, Temperature 32.0 °F	ISO 11403-1 -2
	260 MPa	37700 psi	
	@Strain 2.02 %, Temperature -40.0 °C	@Strain 2.02 %, Temperature -40.0 °F	ISO 11403-1 -2
Elongation at Break	2.0 %	2.0 %	ISO 527-1/-2

Mechanical Properties Tensile Modulus	Metric 13.5 GPa	English 1960 ksi	Comments ISO 527-1/-2
Flexural Modulus	13.5 GPa	1960 ksi	ISO 178
Shear Modulus	0.593 GPa @Temperature 160 °C	86.0 ksi @Temperature 320 °F	Dynamic; ISO 11403-1 -2
	0.716 GPa @Temperature 120 °C	104 ksi @Temperature 248 °F	Dynamic; ISO 11403-1 -2
	1.576 GPa @Temperature 70.0 °C	228.6 ksi @Temperature 158 °F	Dynamic; ISO 11403-1 -2
	2.561 GPa @Temperature 20.0 °C	371.4 ksi @Temperature 68.0 °F	Dynamic; ISO 11403-1 -2
	2.827 GPa @Temperature -20.0 °C	410.0 ksi @Temperature -4.00 °F	Dynamic; ISO 11403-1 -2
	3.017 GPa @Temperature -50.0 °C	437.6 ksi @Temperature -58.0 °F	Dynamic; ISO 11403-1 -2
	Shear Strength	0.0695 MPa @Shear Rate 500 1/s, Temperature 305 °C	10.1 psi @Shear Rate 500 1/s, Temperature 581 °F
0.0875 MPa @Shear Rate 500 1/s, Temperature 295 °C		12.7 psi @Shear Rate 500 1/s, Temperature 563 °F	ISO 11403-1 -2
0.1115 MPa @Shear Rate 500 1/s, Temperature 285 °C		16.17 psi @Shear Rate 500 1/s, Temperature 545 °F	ISO 11403-1 -2
Secant Modulus	8.60 GPa @Strain 1.79 %, Temperature 40.0 °C	1250 ksi @Strain 1.79 %, Temperature 104 °F	ISO 11403-1 -2
	9.00 GPa @Strain 2.00 %, Temperature 23.0 °C	1310 ksi @Strain 2.00 %, Temperature 73.4 °F	ISO 11403-1 -2
	12.2 GPa @Strain 0.900 %, Temperature 40.0 °C	1770 ksi @Strain 0.900 %, Temperature 104 °F	ISO 11403-1 -2
	12.7 GPa @Strain 1.52 %,	1840 ksi @Strain 1.52 %,	ISO 11403-1 -2

Mechanical Properties	Temperature 0.000 °C Metric	Temperature 32.0 °F English	Comments
	14.2 GPa @Strain 1.61 %, Temperature -40.0 °C	2050 ksi @Strain 1.61 %, Temperature -40.0 °F	ISO 11403-1 -2
	14.5 GPa @Strain 0.500 %, Temperature 23.0 °C	2100 ksi @Strain 0.500 %, Temperature 73.4 °F	ISO 11403-1 -2
	15.8 GPa @Strain 0.760 %, Temperature 0.000 °C	2290 ksi @Strain 0.760 %, Temperature 32.0 °F	ISO 11403-1 -2
	15.9 GPa @Strain 0.220 %, Temperature 40.0 °C	2310 ksi @Strain 0.220 %, Temperature 104 °F	ISO 11403-1 -2
	16.7 GPa @Strain 0.810 %, Temperature -40.0 °C	2420 ksi @Strain 0.810 %, Temperature -40.0 °F	ISO 11403-1 -2
	18.3 GPa @Strain 0.190 %, Temperature 0.000 °C	2650 ksi @Strain 0.190 %, Temperature 32.0 °F	ISO 11403-1 -2
	18.8 GPa @Strain 0.200 %, Temperature -40.0 °C	2730 ksi @Strain 0.200 %, Temperature -40.0 °F	ISO 11403-1 -2
Izod Impact, Notched (ISO)	11.0 kJ/m ²	5.23 ft-lb/in ²	ISO 180/1A
Charpy Impact Unnotched	6.00 J/cm ²	28.6 ft-lb/in ²	ISO 179/1eU
	4.00 J/cm ² @Temperature -30.0 °C	19.0 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	1.10 J/cm ²	5.23 ft-lb/in ²	ISO 179/1eA
	1.10 J/cm ² @Temperature -30.0 °C	5.23 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
Tensile Creep Modulus, 1 hour	15600 MPa @Time 3600 sec	2.26e+6 psi @Time 1.00 hour	ISO 899-1

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215, Fengxian District, Shanghai City, China