Rynite® 530 NC010

THERMOPLASTIC POLYESTER RESIN

DuPont Performance Polymers

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Technical Data

Product Description	
30% Glass Reinforced Polyethylene Terephthalate	

General			
Material Status	• Commercial: Active		
Literature [1]	• Processing - Injection Molding (English) • Typical Processing for DuPont Engineering Polymers (English)		
UL Yellow Card [2]	• E41938-257700		
Search for UL Yellow Card	• DuPont Performance Polymers • Rynite®		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Additive	• Mold Release		
RoHS Compliance	• Contact Manufacturer		
Forms	• Pellets		
Processing Method	• Injection Molding		
Multi-Point Data	• Creep Modulus vs. Time (ISO 11403-1) • Isochronous Stress vs. Strain (ISO 11403-1) • Isothermal Stress vs. Strain (ISO 11403-1)	• Secant Modulus vs. Strain (ISO 11403-1) • Shear Modulus vs. Temperature (ISO 11403-1) • Shear Stress vs. Shear Rate (ISO 11403-1)	• Viscosity vs. Shear Rate (ISO 11403-2)
Part Marking Code (ISO 11469)	• >PET-GF30<		
Resin ID (ISO 1043)	• PET-GF30		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.56 g/cm³	1.56 g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (280°C/2.16 kg)	0.305 in³/10min	5.00 cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	0.80 %	0.80 %	
Flow	0.20 %	0.20 %	
Water Absorption			ISO 62
Saturation, 73°F (23°C), 0.0787 in (2.00 mm)	0.70 %	0.70 %	
Equilibrium, 73°F (23°C), 0.0787 in (2.00 mm), 50% RH	0.20 %	0.20 %	

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	1.60E+6 psi	11000 MPa	ISO 527-2
Tensile Stress (Break)	22900 psi	158 MPa	ISO 527-2
Tensile Strain (Break)	2.5 %	2.5 %	ISO 527-2
Tensile Creep Modulus			ISO 899-1
1 hr	1.57E+6 psi	10800 MPa	
1000 hr	1.28E+6 psi	8800 MPa	
Flexural Modulus	1.30E+6 psi	8950 MPa	ISO 178
Flexural Stress	33400 psi	230 MPa	ISO 178

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-40°F (-40°C)	4.8 ft·lb/in²	10 kJ/m²	
-22°F (-30°C)	5.2 ft·lb/in²	11 kJ/m²	
73°F (23°C)	5.2 ft·lb/in²	11 kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	21 ft·lb/in²	45 kJ/m²	
73°F (23°C)	29 ft·lb/in²	60 kJ/m²	

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Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness			ISO 2039-2
M-Scale	100	100	
R-Scale	120	120	
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	473 °F	245 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	435 °F	224 °C	ISO 75-2/A
Vicat Softening Temperature	446 °F	230 °C	ISO 306/B50
Melting Temperature [4]	486 °F	252 °C	ISO 11357-3
CLTE			ISO 11359-2
Flow	5.6E-6 in/in/°F	1.0E-5 cm/cm/°C	
Flow : -40 to 73°F (-40 to 23°C)	1.2E-5 in/in/°F	2.2E-5 cm/cm/°C	
Flow : 131 to 320°F (55 to 160°C)	2.2E-6 in/in/°F	4.0E-6 cm/cm/°C	
Transverse	4.5E-5 in/in/°F	8.1E-5 cm/cm/°C	
Transverse : -40 to -9°F (-40 to -23°C)	3.7E-5 in/in/°F	6.7E-5 cm/cm/°C	
Transverse : 131 to 320°F (55 to 160°C)	5.9E-5 in/in/°F	1.1E-4 cm/cm/°C	
Thermal Conductivity	2.0 Btu·in/hr/ft²/°F	0.29 W/m/K	
Effective Thermal Diffusivity	1.30E-7 m²/s	1.30E-7 m²/s	
Electrical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Surface Resistivity	1.0E+14 ohms	1.0E+14 ohms	IEC 60093
Volume Resistivity	1.0E+15 ohms·cm	1.0E+15 ohms·cm	IEC 60093
Electric Strength	970 V/mil	38 kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.20	4.20	
1 MHz	3.90	3.90	
Dissipation Factor			IEC 60250
100 Hz	0.013	0.013	
1 MHz	7.0E-3	7.0E-3	
Comparative Tracking Index (CTI)	PLC 2	PLC 2	UL 746
Comparative Tracking Index	250 V	250 V	IEC 60112
Flammability	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Burning Rate [5] (0.0394 in (1.00 mm))	1.5 in/min	38 mm/min	ISO 3795
Flame Rating			UL 94 IEC 60695-11-10, -20
0.0295 in (0.750 mm)	HB	HB	
0.0591 in (1.50 mm)	HB	HB	
Oxygen Index	20 %	20 %	ISO 4589-2
Fogging - G-value (condensate)	0.0 g	0.0 g	ISO 6452
Additional Information	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Emission of Organic Compounds	16.0 µgC/g	16.0 µgC/g	VDA 277
Odor	3.00	3.00	VDA 270

Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	248 °F	120 °C	
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr	
Suggested Max Moisture	0.020 %	0.020 %	
Processing (Melt) Temp	536 to 572 °F	280 to 300 °C	
Melt Temperature, Optimum	545 °F	285 °C	
Mold Temperature	248 to 284 °F	120 to 140 °C	
Mold Temperature, Optimum	266 °F	130 °C	
Holding Pressure	11600 psi	80.0 MPa	
Back Pressure	As low as possible	As low as possible	
Drying Recommended	yes	yes	
Ejection Temperature	338 °F	170 °C	

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Injection	Nominal Value (English)	Nominal Value (SI)
Hold Pressure Time	4.00 s/mm	4.00 s/mm
Screw Tangential Speed	472 in/min	200 mm/sec

Injection Notes

At moisture levels above 0.02%, strength and toughness will decrease, even though parts may not exhibit surface defects.

Notes

[1] These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

[2] A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

[3] Typical properties: these are not to be construed as specifications.

[4] 10°C/min

[5] FMVSS 302

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Where to Buy

Supplier

DuPont Performance Polymers
Wilmington, DE USA
Telephone: 302-999-4592
Web: http://plastics.dupont.com/

Distributor

Biesterfeld Plastic GmbH
Biesterfeld Plastic GmbH is a Pan European distribution company. Contact Biesterfeld Plastic GmbH for availability of individual products by country.
Telephone: +49-40-32008-0
Web: http://www.biesterfeld-plastic.com/
Availability: Algeria, Austria, Belgium, Bosnia and Herzegovina, Brazil, Bulgaria, Croatia, Cyprus, Czech Republic, Egypt, France, Germany, Greece, Hungary, Italy, Libyan Arab Jamahiriya, Luxembourg, Mauritania, Morocco, Netherlands, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Switzerland, Tunisia, Turkey

CCC Plastics
Telephone: 800-465-6917
Web: http://www.cccplastics.com/
Availability: Canada

Distrupol Ltd
Distrupol Ltd is a Pan European distribution company. Contact Distrupol Ltd for availability of individual products by country.
Telephone: 08452003040
Web: http://www.distrupol.com/
Availability: Denmark, Finland, Ireland, Norway, Sweden, United Kingdom

PolyOne Distribution
PolyOne Distribution is a global distribution company. Contact PolyOne Distribution for availability of individual products by country.
Telephone: 800-894-4266
Web: http://polyonedistribution.com/
Availability: Global

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