DuPont™ Rynite® FR530L NC010

THERMOPLASTIC POLYESTER RESIN

Product Information			
Rynite® FR530L NC010 is a 30% Glass Reinforced, Flame Retardant, Polyethylene Terephthalate			
General information	Value	Unit	Test Standard
Resin Identification	PET-GF30FR(17)	-	ISO 1043
Part Marking Code	>PET-GF30FR(17)<	-	ISO 11469
Rheological properties	Value	Unit	Test Standard
Melt volume-flow rate	6	cm^3/10min	ISO 1133
Temperature	280	°C	ISO 1133
Load	2.16	kg	ISO 1133
Moulding shrinkage, parallel	0.2	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.8	%	ISO 294-4, 2577
Mechanical properties	Value	Unit	Test Standard
Tensile Modulus	11500	MPa	ISO 527-1/-2
Stress at break	135	MPa	ISO 527-1/-2
Strain at break	2	%	ISO 527-1/-2
Flexural Modulus	10500	MPa	ISO 178
Tensile creep modulus			ISO 899-1
1h	11200	MPa	
1000h	9700	MPa	
Charpy impact strength			ISO 179/1eU
23°C	40	kJ/m^2	
-30°C	40	kJ/m^2	
Charpy notched impact strength			ISO 179/1eA
23°C	10	kJ/m^2	
-30°C	9	kJ/m^2	
Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	252	°C	ISO 11357-1/-3
Temp. of deflection under load			ISO 75-1/-2
1.8 MPa	225	°C	
0.45 MPa	243	°C	
Vicat softening temperature, 50°C/h, 50N	220	°C	ISO 306
Coeff. of linear therm. expansion, parallel	19	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion			ISO 11359-1/-2
normal	92	E-6/K	
Normal, -40-23°C	68	E-6/K	
Parallel, -40-23°C	22	E-6/K	
RTI, electrical, 0.4mm	155	°C	UL 746B
RTI, impact, 0.75 mm	155	°C	UL 746B
RTI, strength, 0.75 mm	155	°C	UL 746B
Flammability	Value	Unit	Test Standard
Burning Behav. at 1.5mm nom. thickn.	V-0	class	IEC 60695-11-10
Thickness tested	1.5	mm	IEC 60695-11-10
UL recognition	UL	-	UL 94
Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.35	mm	IEC 60695-11-10
UL recognition	UL	-	UL 94
Burning Behav. 5V at thickness h	5VA	class	IEC 60695-11-20
Thickness tested	0.9	mm	IEC 60695-11-20
UL recognition	UL	-	UL 94
Oxygen index	33	%	ISO 4589-1/-2
Glow Wire Flammability Index			IEC 60695-2-1/2
0.75mm	960	°C	
3mm	960	°C	

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Glow Wire Ignition Temperature			IEC 60695-2-1/3
0.75mm	800	°C	
1.5mm	800	°C	
2mm	985	°C	
Electrical properties	**Value**	**Unit**	**Test Standard**
Relative permittivity			IEC 60250
100Hz	4.8	-	
1MHz	4.7	-	
Dissipation factor			IEC 60250
100Hz	70	E-4	
1MHz	100	E-4	
Volume resistivity	1E13	Ohm*m	IEC 60093
Surface resistivity	1E14	Ohm	IEC 60093
Electric strength	33	kV/mm	IEC 60243-1
Comparative tracking index			
Comparative tracking index	225	-	IEC 60112
CTI, 23°C	2	PLC	UL 746A
Other properties	**Value**	**Unit**	**Test Standard**
Humidity absorption, 2mm	0.15	%	Sim. to ISO 62
Water absorption, 2mm	0.75	%	Sim. to ISO 62
Density	1680	kg/m³	ISO 1183
Injection	**Value**	**Unit**	**Test Standard**
Drying Recommended	yes	-	-
Drying Temperature	120	°C	-
Drying Time, Dehumidified Dryer	4 - 6	h	-
Processing Moisture Content	≤0.02[1]	%	-
Melt Temperature Optimum	280	°C	-
Min. melt temperature	270	°C	-
Max. melt temperature	290	°C	-
Max. screw tangential speed	0.2	m/s	-
Mold Temperature Optimum	110	°C	-
Min. mould temperature	100	°C	-
Max. mould temperature	120[2]	°C	-
Hold pressure range	≥80	MPa	-
Hold pressure time	4	s/mm	-
Back pressure	As low as possible		-
Ejection temperature	170	°C	-

1: At levels above 0.02%, strength and toughness will decrease, even though parts may not exhibit surface defects. 2: (6mm - 1mm thickness)

Characteristics		
Processing	• Injection Moulding	
Delivery form	• Pellets	
Additives	• Release agent	• Flame retardant

Processing Texts

Injection molding

Molding guide

To find out more, visit DuPont Performance Polymers or contact nearest DuPont location.

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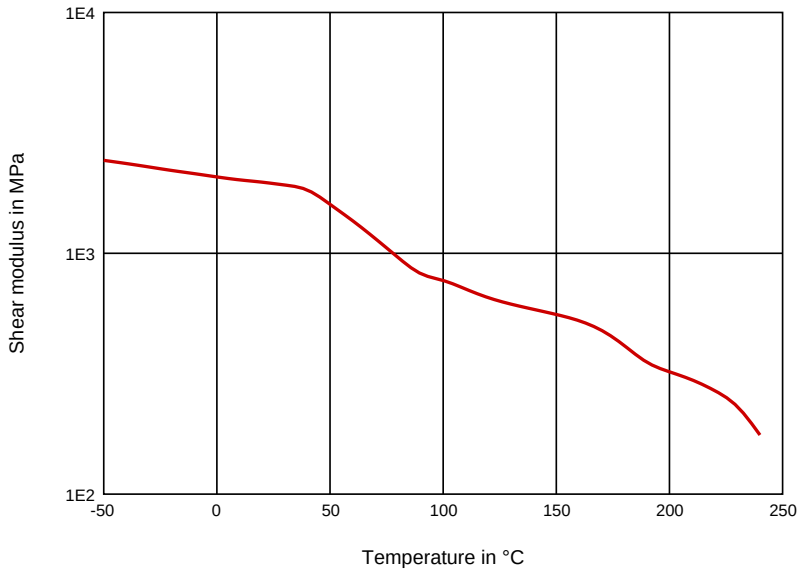
Diagrams

Dynamic Shear modulus-temperature



Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc. ISO Mechanical properties measured at 4.0mm (Hytrel® measured at 2 mm), IEC Electrical properties measured at 2.0mm, all ASTM properties measured at 3.2mm, and test temperatures are 23°C unless otherwise stated.

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