

DuPont™ Rynite® FR530 BK507

THERMOPLASTIC POLYESTER RESIN

Product Information

Common features of Rynite® thermoplastic polyester include mechanical and physical properties such as excellent balance of strength and stiffness, dimensional stability, creep resistance, heat resistance, high surface gloss and good inherent electrical properties at elevated temperature. It can be processed over a broad temperature range and has excellent flow properties.

Rynite® thermoplastic polyester resins are typically used in demanding applications in the automotive, electrical and electronics, appliances where they successfully replace metals and thermosets, as well as other thermoplastic polymers.

Rynite® FR530 BK507 is a 30% glass reinforced, flame retardant, modified polyethylene terephthalate resin.

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
Molding shrinkage, parallel	0.2	%	ISO 294-4, 2577
Molding shrinkage, normal	0.8	%	ISO 294-4, 2577
Mechanical properties	Value	Unit	Test Standard
Tensile Modulus	11300	MPa	ISO 527-1/-2
Stress at break	130	MPa	ISO 527-1/-2
Strain at break	1.9	%	ISO 527-1/-2
Flexural Modulus	10500	MPa	ISO 178
Flexural Strength	200	MPa	ISO 178
Charpy impact strength			ISO 179/1eU
73°F	40	kJ/m ²	
-40°F	30	kJ/m ²	
Charpy notched impact strength			ISO 179/1eA
73°F	9	kJ/m ²	
-40°F	8	kJ/m ²	
Thermal properties	Value	Unit	Test Standard
Melting temperature, 18°F/min	252	°C	ISO 11357-1/-3
Temp. of deflection under load			ISO 75-1/-2
260 psi	220	°C	
65 psi	243	°C	
Coeff. of linear therm. expansion, parallel	22	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion			ISO 11359-1/-2
normal	96	E-6/K	
Normal, -40-23°C	68	E-6/K	
Normal, 55-160°C	125	E-6/K	
Parallel, -40-23°C	19	E-6/K	
Parallel, 55-160°C	17	E-6/K	
RTI, electrical			UL 746B
15mil	155	°C	
30mil	155	°C	
60mil	155	°C	
120mil	155	°C	
RTI, impact			UL 746B
15mil	155	°C	
30mil	155	°C	
60mil	155	°C	
120mil	155	°C	

To find out more, visit [DuPont Performance Polymers](#) or contact nearest DuPont location.

North America

Asia Pacific

Europe/Middle East/Africa

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RTI, strength			UL 746B
15mil	155	°C	
30mil	155	°C	
60mil	155	°C	
120mil	155	°C	
Flammability	Value	Unit	Test Standard
Burning Behav. at 60mil nom. thickn.	V-0	class	IEC 60695-11-10
Thickness tested	1.5	mm	IEC 60695-11-10
UL recognition	yes	-	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	yes	-	UL 94
Burning Behav. 5V at thickness h	5VA	class	IEC 60695-11-20
Thickness tested	1.5	mm	IEC 60695-11-20
UL recognition	yes	-	UL 94
Oxygen index	33	%	ISO 4589-1/-2
Glow Wire Flammability Index			IEC 60695-2-12
30mil	960	°C	
80mil	960	°C	
120mil	960	°C	
Glow Wire Ignition Temperature			IEC 60695-2-13
30mil	800	°C	
60mil	800	°C	
80mil	850	°C	
120mil	925	°C	
FMVSS Class	DNI	-	ISO 3795 (FMVSS 302)
Electrical properties	Value	Unit	Test Standard
Relative permittivity			IEC 62631-2-1
100Hz	4.1	-	
1MHz	3.7	-	
Dissipation factor			IEC 62631-2-1
100Hz	309	E-4	
1MHz	127	E-4	
Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
Surface resistivity	1E14	Ohm	IEC 62631-3-2
Comparative tracking index			
Comparative tracking index	200	-	IEC 60112
CTI, 23°C	2	PLC	UL 746A
Other properties	Value	Unit	Test Standard
Density	1680	kg/m ³	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. mold temperature	100	°C	-
Max. mold 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)

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Characteristics

Processing	• Injection Molding		
Regional Availability	• North America • Europe	• Asia Pacific • South and Central America	• Near East/Africa • Global

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc. ISO Mechanical properties measured at 160 mil (Hytrel® measured at 80 mil), IEC Electrical properties measured at 80 mil, all ASTM properties measured at 120 mil, and test temperatures are 73°F unless otherwise stated.

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