Rynite® FR515 BK507

THERMOPLASTIC POLYESTER RESIN

Celanese Corporation

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Technical Data

Product Description			
15% Glass Reinforced, Flame Retardant, Polyethylene Terephthalate			
General			
Material Status	• Commercial: Active		
Literature [1]	• Technical Datasheet		
UL Yellow Card [2]	• E41938-257732 • E41938-257733		
Search for UL Yellow Card	• Celanese Corporation • Rynite®		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 15% Filler by Weight		
Additive	• Flame Retardant		
Features	• Flame Retardant		
RoHS Compliance	• Contact Manufacturer		
Multi-Point Data	• Isothermal Stress vs. Strain (ISO 11403)	• Secant Modulus vs. Strain (ISO 11403)	
Part Marking Code (ISO 11469)	• >PET-GF15FR(17)<		
Resin ID (ISO 1043)	• PET-GF15FR(17)		

Physical	Nominal Value	Unit	Test Method
Density	1.55	g/cm³	ISO 1183
Molding Shrinkage [4]			ISO 294-4
Across Flow	0.80	%	
Flow	0.30	%	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	6100	MPa	ISO 527-1
Tensile Stress (Break)	100	MPa	ISO 527-2/5
Tensile Strain (Break)	2.2	%	ISO 527-2/5
Flexural Modulus	6000	MPa	ISO 178
Flexural Stress	160	MPa	ISO 178
Poisson's Ratio	0.35		
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-40°C	6.0	kJ/m²	
23°C	6.2	kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-40°C	20	kJ/m²	
23°C	32	kJ/m²	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, Unannealed	240	°C	ISO 75-2/B
1.8 MPa, Unannealed	200	°C	ISO 75-2/A
Glass Transition Temperature [5]	90.0	°C	ISO 11357-3
Melting Temperature [5]	254	°C	ISO 11357-3

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Thermal	Nominal Value	Unit	Test Method
CLTE			ISO 11359-2
Flow	2.9E-5	cm/cm/°C	
Flow : -40 to 23°C	3.3E-5	cm/cm/°C	
Flow : 55 to 160°C	1.9E-5	cm/cm/°C	
Transverse	9.5E-5	cm/cm/°C	
Transverse : -40 to 23°C	7.4E-5	cm/cm/°C	
Transverse : 55 to 160°C	1.3E-4	cm/cm/°C	

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+13	ohms	IEC 62631-3-2
Volume Resistivity	> 1.0E+13	ohms·m	IEC 62631-3-1
Electric Strength	40	kV/mm	IEC 60243-1
Relative Permittivity			IEC 62631-2-1
100 Hz	3.60		
1 MHz	3.50		
Dissipation Factor			IEC 62631-2-1
100 Hz	0.023		
1 MHz	0.012		
Comparative Tracking Index (CTI) [6]	PLC 3		UL 746A
Comparative Tracking Index	225	V	IEC 60112

Flammability	Nominal Value	Unit	Test Method
Burning Rate [7] (1.00 mm)	< 80	mm/min	ISO 3795
Flame Rating			UL 94 IEC 60695-11-10, -20
0.9 mm	V-0		
1.5 mm	5VA		
Oxygen Index	32	%	ISO 4589-2
FMVSS Flammability	B		FMVSS 302

Fill Analysis	Nominal Value	Unit
Ejection Temperature	170	°C

Injection	Nominal Value	Unit
Drying Temperature	120	°C
Drying Time - Desiccant Dryer	4.0 to 6.0	hr
Suggested Max Moisture	< 0.020	%
Processing (Melt) Temp	270 to 290	°C
Melt Temperature, Optimum	280	°C
Mold Temperature	100 to 120	°C
Mold Temperature, Optimum	110	°C
Holding Pressure	> 80.0	MPa
Back Pressure	As low as possible	
Drying Recommended	yes	
Hold Pressure Time	4.00	s/mm
Screw Tangential Speed	< 12	m/min

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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] Derived from Similar Grade

[5] 10°C/min

[6] 23°C

[7] FMVSS 302, DNI

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