# **Rynite® FR945 BK507** THERMOPLASTIC POLYESTER RESIN

## **Celanese Corporation**

#### **Technical Data**

Product Description			
45% Glass/Mineral Reinforced, Flam	e Retardant, Polyethylene Terephth	nalate	
General			
Material Status	Commercial: Active		
Literature <sup>1</sup>	Technical Datasheet		
UL Yellow Card <sup>2</sup>	• E41938-257742		
Search for UL Yellow Card	Celanese Corporation     Rynite®		
Availability	<ul><li> Africa &amp; Middle East</li><li> Asia Pacific</li></ul>	<ul><li>Europe</li><li>Latin America</li></ul>	North America
Filler / Reinforcement	<ul> <li>Glass Fiber\Mineral, 45% Filler by Weight</li> </ul>		
Additive	Flame Retardant		
Features	Flame Retardant		
RoHS Compliance	Contact Manufacturer		
Part Marking Code (ISO 11469)	<ul> <li>&gt;PET-(MD+GF)45FR(17)</li> </ul>		
Resin ID (ISO 1043)	• PET-(MD+GF)45FR(17)		

Physical	Nominal Value Unit	Test Method
Density	1.85 g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage		ISO 294-4
Across Flow	0.90 %	
Flow	0.50 %	
Mechanical	Nominal Value Unit	Test Method
Tensile Modulus	13000 MPa	ISO 527-1
Tensile Stress (Break)	92.0 MPa	ISO 527-2/5
Tensile Strain (Break)	1.2 %	ISO 527-2/5
Flexural Modulus	12000 MPa	ISO 178
Flexural Stress	140 MPa	ISO 178
Poisson's Ratio	0.33	
Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength		ISO 179/1eA
-40°C	3.0 kJ/m <sup>2</sup>	
23°C	4.0 kJ/m <sup>2</sup>	
Charpy Unnotched Impact Strength (23°C)	20 kJ/m <sup>2</sup>	ISO 179/1eU
Notched Izod Impact Strength (23°C)	4.0 kJ/m <sup>2</sup>	ISO 180/1A
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
Melting Temperature <sup>4</sup>	250 °C	ISO 11357-3

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THERMOPLASTIC POLYESTER RESIN Celanese Corporation



Flammability	Nominal Value Unit	Test Method
Burning Rate <sup>5</sup> (1.00 mm)	< 80 mm/min	ISO 3795
Flame Rating		UL 94
0.8 mm	V-0	IEC 60695-11-10, -20
1.5 mm	• V-0 • 5VA	
Glow Wire Ignition Temperature		IEC 60695-2-13
0.75 mm	825 °C	
1.5 mm	825 °C	
3.0 mm	925 °C	
FMVSS Flammability	В	FMVSS 302
Fill Analysis	Nominal Value Unit	
Ejection Temperature	170 °C	
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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	

#### Notes

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> Typical properties: these are not to be construed as specifications.

<sup>4</sup> 10°C/min

<sup>5</sup> FMVSS 302



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