

Technical Data

Product Description

30% Glass Reinforced, Flame Retardant, Polyethylene Terephthalate

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet
UL Yellow Card ²	• E41938-257735
Search for UL Yellow Card	• Celanese Corporation • Rynite®
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Filler / Reinforcement	• Glass Fiber, 30% 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-GF30FR(17)<
Resin ID (ISO 1043)	• PET-GF30FR(17)

Physical	Nominal Value Unit	Test Method
Density	1.68 g/cm ³	ISO 1183
Molding Shrinkage		ISO 294-4
Across Flow	0.80 %	
Flow	0.20 %	
Water Absorption ⁴		ISO 62
Saturation, 23°C, 2.00 mm	0.75 %	
Equilibrium, 23°C, 2.00 mm, 50% RH	0.15 %	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus	11000 MPa	ISO 527-1
Tensile Stress (Break)	130 MPa	ISO 527-2/5
Tensile Strain (Break)	1.9 %	ISO 527-2/5
Flexural Modulus	10000 MPa	ISO 178
Flexural Stress	200 MPa	ISO 178
Poisson's Ratio	0.33	

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength		ISO 179/1eA
-40°C	8.0 kJ/m ²	
23°C	9.0 kJ/m ²	
Charpy Unnotched Impact Strength		ISO 179/1eU
-40°C	30 kJ/m ²	
23°C	40 kJ/m ²	

Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load		
0.45 MPa, Unannealed	240 °C	ISO 75-2/B
1.8 MPa, Unannealed	220 °C	ISO 75-2/A



Thermal	Nominal Value Unit	Test Method
Glass Transition Temperature ⁵	90.0 °C	ISO 11357-3
Ball Pressure Test (230°C)	Pass	IEC 60695-10-2
Melting Temperature ⁵	252 °C	ISO 11357-3
CLTE		ISO 11359-2
Flow	2.2E-5 cm/cm/°C	
Flow : -40 to 23°C	1.9E-5 cm/cm/°C	
Flow : 55 to 160°C	1.7E-5 cm/cm/°C	
Transverse	9.6E-5 cm/cm/°C	
Transverse : -40 to 23°C	6.8E-5 cm/cm/°C	
Transverse : 55 to 160°C	1.3E-4 cm/cm/°C	
RTI Elec		UL 746B
0.40 mm	155 °C	
0.75 mm	155 °C	
1.5 mm	155 °C	
3.0 mm	155 °C	
RTI Imp		UL 746B
0.40 mm	155 °C	
0.75 mm	155 °C	
1.5 mm	155 °C	
3.0 mm	155 °C	
RTI Str		UL 746B
0.40 mm	155 °C	
0.75 mm	155 °C	
1.5 mm	155 °C	
3.0 mm	155 °C	
Electrical	Nominal Value Unit	Test Method
Surface Resistivity	1.0E+14 ohms	IEC 62631-3-2
Volume Resistivity	> 1.0E+13 ohms·m	IEC 62631-3-1
Electric Strength ⁴	39 kV/mm	IEC 60243-1
Relative Permittivity		IEC 62631-2-1
100 Hz	4.10	
1 MHz	3.70	
Dissipation Factor		IEC 62631-2-1
100 Hz	0.031	
1 MHz	0.013	
Comparative Tracking Index (CTI) ⁶	PLC 2	UL 746A
Comparative Tracking Index	200 V	IEC 60112



Flammability	Nominal Value Unit	Test Method
Flame Rating		UL 94
0.35 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	800 °C	
1.5 mm	800 °C	
2.0 mm	850 °C	
3.0 mm	925 °C	
Oxygen Index	33 %	ISO 4589-2
FMVSS Flammability	DNI	FMVSS 302
Fill Analysis	Nominal Value Unit	
Ejection Temperature	170 °C	
Additional Information	Nominal Value Unit	Test Method
Railway Classification	R23 HL1	EN 45545-2
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

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

