

Technical Data

Product Description

45% Glass Reinforced Polyethylene Terephthalate

General

Material Status	• Commercial: Active
Literature ¹	• Processing - Injection Molding (English) • Typical Processing for DuPont Engineering Polymers (English)
UL Yellow Card ²	• E41938-257704
Search for UL Yellow Card	• DuPont Performance Polymers • Rynite®
Availability	• Africa & Middle East • Europe • Asia Pacific • Latin America • North America
Filler / Reinforcement	• Glass Fiber, 45% Filler by Weight
RoHS Compliance	• Contact Manufacturer
Processing Method	• Injection Molding
Part Marking Code (ISO 11469)	• >PET-GF45<
Resin ID (ISO 1043)	• PET-GF45

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.70 g/cm ³	1.70 g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	0.80 %	0.80 %	
Flow	0.20 %	0.20 %	

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	2.25E+6 psi	15500 MPa	ISO 527-2
Tensile Stress (Break)	25400 psi	175 MPa	ISO 527-2
Tensile Strain (Break)	1.9 %	1.9 %	ISO 527-2
Flexural Modulus	2.03E+6 psi	14000 MPa	ISO 178

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength (73°F (23°C))	5.2 ft·lb/in ²	11 kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength 73°F (23°C)	29 ft·lb/in ²	60 kJ/m ²	ISO 179/1eU

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature 264 psi (1.8 MPa), Unannealed	446 °F	230 °C	ISO 75-2/A
Melting Temperature ⁴	480 °F	249 °C	ISO 11357-3
CLTE			ISO 11359-2
Flow	9.4E-6 in/in/°F	1.7E-5 cm/cm/°C	
Transverse	4.7E-5 in/in/°F	8.5E-5 cm/cm/°C	

Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate ⁵ (0.0394 in (1.00 mm))	< 3.9 in/min	< 100 mm/min	ISO 3795
Flame Rating			UL 94 IEC 60695-11-10, -20
0.0295 in (0.750 mm)	HB	HB	
0.0591 in (1.50 mm)	HB	HB	
Fogging - G-value (condensate)	0.0 g	0.0 g	ISO 6452

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	248 °F	120 °C
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr
Suggested Max Moisture	0.020 %	0.020 %
Processing (Melt) Temp	536 to 572 °F	280 to 300 °C



Injection	Nominal Value (English)	Nominal Value (SI)
Melt Temperature, Optimum	545 °F	285 °C
Mold Temperature	230 to 266 °F	110 to 130 °C
Mold Temperature, Optimum	248 °F	120 °C
Holding Pressure	11600 psi	80.0 MPa
Back Pressure	As low as possible	As low as possible
Drying Recommended	yes	yes
Ejection Temperature	338 °F	170 °C
Hold Pressure Time	4.00 s/mm	4.00 s/mm
Screw Tangential Speed	472 in/min	200 mm/sec

Injection Notes

At moisture levels above 0.02%, strength and toughness will decrease, even though parts may not exhibit surface defects.

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 10°C/min

⁵ FMVSS 302



Where to Buy

Supplier

DuPont Performance Polymers

Wilmington, DE USA
Telephone: 302-999-4592
Web: <http://plastics.dupont.com/>

Distributor

Biesterfeld Plastic GmbH

Biesterfeld Plastic GmbH is a Pan European distribution company. Contact Biesterfeld Plastic GmbH for availability of individual products by country.

Telephone: +49-40-32008-0

Web: <http://www.biesterfeld-plastic.com/>

Availability: Algeria, Austria, Belgium, Bosnia and Herzegovina, Brazil, Bulgaria, Croatia, Cyprus, Czech Republic, Egypt, France, Germany, Greece, Hungary, Italy, Libyan Arab Jamahiriya, Luxembourg, Mauritania, Morocco, Netherlands, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Switzerland, Tunisia, Turkey

CCC Plastics

Telephone: 800-465-6917

Web: <http://www.cccplastics.com/>

Availability: Canada

Distrupol Ltd

Distrupol Ltd is a Pan European distribution company. Contact Distrupol Ltd for availability of individual products by country.

Telephone: 08452003040

Web: <http://www.distrupol.com/>

Availability: Denmark, Finland, Ireland, Norway, Sweden, United Kingdom

PolyOne Distribution

PolyOne Distribution is a global distribution company. Contact PolyOne Distribution for availability of individual products by country.

Telephone: 800-894-4266

Web: <http://polyonedistribution.com/>

Availability: Global

