

Technical Data

Product Description

30% glass fiber, excellent flow, high temperature capability
High temperature capability, easiest flow. Suitable where very thin walls are required. Used for broad range of SMT applications, with minimal dimensional change. 30% glass filled. Chemical abbreviation according to ISO 1043-1 : LCP Inherently flame retardant FDA compliant UL-Listing V-0 in natural and black at .2mm thickness per UL 94 flame testing. Relative-Temperature-Index (RTI) according to UL 746B: electrical 240°C, mechanical 240°C at 0.75mm. UL = Underwriters Laboratories (USA)

General

Material Status	• Commercial: Active		
UL Yellow Card ¹	• E83005-251021 • E83005-102296306		
Search for UL Yellow Card	• Celanese Corporation • Vectra®		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber		
Additive	• Flame Retardant	• UV Stabilizer	
Features	• Flame Retardant	• Light Stabilized	
Uses	• Automotive Applications	• Lighting Applications	
Forms	• Pellets		
Processing Method	• Injection Molding		
Multi-Point Data	• Isothermal Stress vs. Strain (ISO 11403-1)	• Secant Modulus vs. Strain (ISO 11403-1)	• Specific Volume vs Temperature (ISO 11403-2)

Physical	Nominal Value Unit	Test Method
Density	1.61 g/cm ³	ISO 1183
Molding Shrinkage		ISO 294-4
Across Flow	0.40 %	
Flow	0.10 %	
Water Absorption (Equilibrium, 23°C, 50% RH)	0.030 %	ISO 62

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus	16000 MPa	ISO 527-1/1A
Tensile Stress (Break)	160 MPa	ISO 527-2/1A/5
Tensile Strain (Break)	1.6 %	ISO 527-2/1A/5
Flexural Modulus (23°C)	15000 MPa	ISO 178
Flexural Stress (23°C)	220 MPa	ISO 178
Flexural Strain at Break	2.2 %	ISO 178
Compressive Modulus	14000 MPa	ISO 604
Compressive Stress (1% Strain)	93.0 MPa	ISO 604

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength (23°C)	38 kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	43 kJ/m ²	ISO 179/1eU
Notched Izod Impact Strength (23°C)	27 kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	31 kJ/m ²	ISO 180/1U

Hardness	Nominal Value Unit	Test Method
Rockwell Hardness (M-Scale)	71	ISO 2039-2



Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load		
1.8 MPa, Unannealed	270 °C	ISO 75-2/A
8.0 MPa, Unannealed	216 °C	ISO 75-2/C
Vicat Softening Temperature	195 °C	ISO 306/B50
Melting Temperature ³	335 °C	ISO 11357-3
CLTE		ISO 11359-2
Flow	7.0E-6 cm/cm/°C	
Transverse	2.0E-5 cm/cm/°C	
Electrical	Nominal Value Unit	Test Method
Surface Resistivity	1.0E+14 ohms	IEC 60093
Volume Resistivity	1.0E+15 ohms·cm	IEC 60093
Electric Strength	32 kV/mm	IEC 60243-1
Dielectric Constant		
100 Hz	4.00	IEC 60250
1 kHz	4.30	IEC 60250
1 MHz	3.90	IEC 60250
1.00 GHz	3.80	IEC 61189-2-721
2.00 GHz	3.90	IEC 61189-2-721
Dissipation Factor		
100 Hz	0.010	IEC 60250
1 kHz	0.0	IEC 60250
1 MHz	0.036	IEC 60250
1.00 GHz	6.0E-3	IEC 61189-2-721
2.00 GHz	6.0E-3	IEC 61189-2-721
Arc Resistance	140 sec	Internal Method
Comparative Tracking Index (CTI)	PLC 3	UL 746A
Flammability	Nominal Value Unit	Test Method
Flame Rating	V-0	UL 94
Oxygen Index	45 %	ISO 4589-2
Additional Information	Nominal Value Unit	Test Method
Specimen Thickness - shrinkage	3.18 mm	Internal Method
Injection	Nominal Value Unit	
Drying Temperature	150 to 170 °C	
Drying Time	4.0 to 6.0 hr	
Suggested Max Moisture	0.010 %	
Hopper Temperature	20 to 30 °C	
Injection Feed Temperature	60 to 80 °C	
Rear Temperature	315 to 325 °C	
Middle Temperature	320 to 330 °C	
Front Temperature	325 to 335 °C	
Injection Zone 4 Temperature	330 to 340 °C	
Nozzle Temperature	335 to 345 °C	
Processing (Melt) Temp	335 to 345 °C	
Mold Temperature	80 to 120 °C	
Injection Pressure	50.0 to 150 MPa	
Injection Rate	Fast	
Holding Pressure	50.0 to 150 MPa	
Back Pressure	< 3.00 MPa	
Hot Runner	335 to 345 °C	



Injection	Nominal Value Unit
Screw Speed	
1.60 cm	200
2.50 cm	140
4.00 cm	80

Notes

¹ 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.

² Typical properties: these are not to be construed as specifications.

³ 10°C/min



Where to Buy

Supplier

Celanese Corporation

Florence, Florence USA

Telephone: 800-833-4882

Web: <http://www.celanese.com/engineered-materials>

Distributor

Amco Polymers

Telephone: 800-262-6685

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

Availability: North America

Channel Prime Alliance

Telephone: 800-247-8038

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

Availability: North America

Entec Polymers

Telephone: 833-319-0299

Web: https://www.entecpolymers.com/?utm_source=ul&utm_medium=paid%20association&utm_campaign=entec%20%7C%20entec%201&utm_term=ul%20%7C%20where%20to%20buy

Availability: North America

RESINEX Group

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

Telephone: +32-14-672511

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

Availability: Europe

