Lupox® GP1006FD

Polybutylene Terephthalate

LG Chem Ltd.

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Technical Data

Product Description	
Description	Flame Retardant, High Impact
Applications	IT/OA, Automotive (Connector)

General		
Material Status	• Commercial: Active	
Literature [1]	• Technical Datasheet (English)	
UL Yellow Card [2]	• E302314-530020 • E67171-248568 • E248280-533891 • E353371-101101330 • E67171-248609 • E67171-301077	
Search for UL Yellow Card	• LG Chem Ltd. • Lupox®	
Availability	• Asia Pacific • Europe	• Latin America • North America
Additive	• Flame Retardant	
Features	• Flame Retardant	• High Impact Resistance
Uses	• Automotive Applications	• Connectors
Automotive Specifications	• GM GMW15702-120010	• IMDS ID 5839561
Processing Method	• Injection Molding	
Multi-Point Data	• Isothermal Stress vs. Strain (ISO 11403-1) • Secant Modulus vs. Strain (ISO 11403-1)	• Specific Heat vs. Temperature (ISO 11403-2) • Viscosity vs. Shear Rate (ISO 11403-2)

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.42	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (250°C/2.16 kg)	18	g/10 min	ASTM D1238
Molding Shrinkage - Flow			ASTM D955
23°C, 3.20 mm, Injection Molded	1.2 to 2.0	%	
Water Absorption (24 hr, 23°C)	0.080	%	ASTM D570

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength [4]			ASTM D638
Yield, 23°C, 3.20 mm, Injection Molded	51.0	MPa	
Tensile Elongation [4]			ASTM D638
Break, 23°C, 3.20 mm, Injection Molded	> 50	%	
Flexural Modulus [5]			ASTM D790
23°C, 3.20 mm, Injection Molded	2160	MPa	
Flexural Strength [5]			ASTM D790
23°C, 3.20 mm, Injection Molded	71.6	MPa	

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
23°C, 6.40 mm, Injection Molded	59	J/m	

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Document Created: Thursday, January 31, 2019
Added to Prospector: June 2001
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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed, 6.40 mm, Injection Molded	62.0	°C	
Peak Melting Temperature	223	°C	ASTM D3418
RTI Elec	130	°C	UL 746
RTI Imp	130	°C	UL 746
RTI Str	140	°C	UL 746

Electrical	Nominal Value	Unit	Test Method
Volume Resistivity (23°C)	1.0E+13	ohms·cm	ASTM D257
Dielectric Strength (23°C, 1.00 mm)	20	kV/mm	ASTM D149
Arc Resistance	PLC 6		ASTM D495
Comparative Tracking Index (CTI) [6]	PLC 0		UL 746

Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.71 mm	V-0		
1.5 mm	V-0		
3.0 mm	V-0		
•	5VA		

Injection	Nominal Value	Unit
Drying Temperature	110 to 120	°C
Drying Time	4.0 to 6.0	hr
Suggested Max Moisture	0.020	%
Rear Temperature	235 to 240	°C
Middle Temperature	240 to 245	°C
Front Temperature	245 to 250	°C
Nozzle Temperature	245 to 255	°C
Processing (Melt) Temp	245 to 255	°C
Mold Temperature	40 to 80	°C

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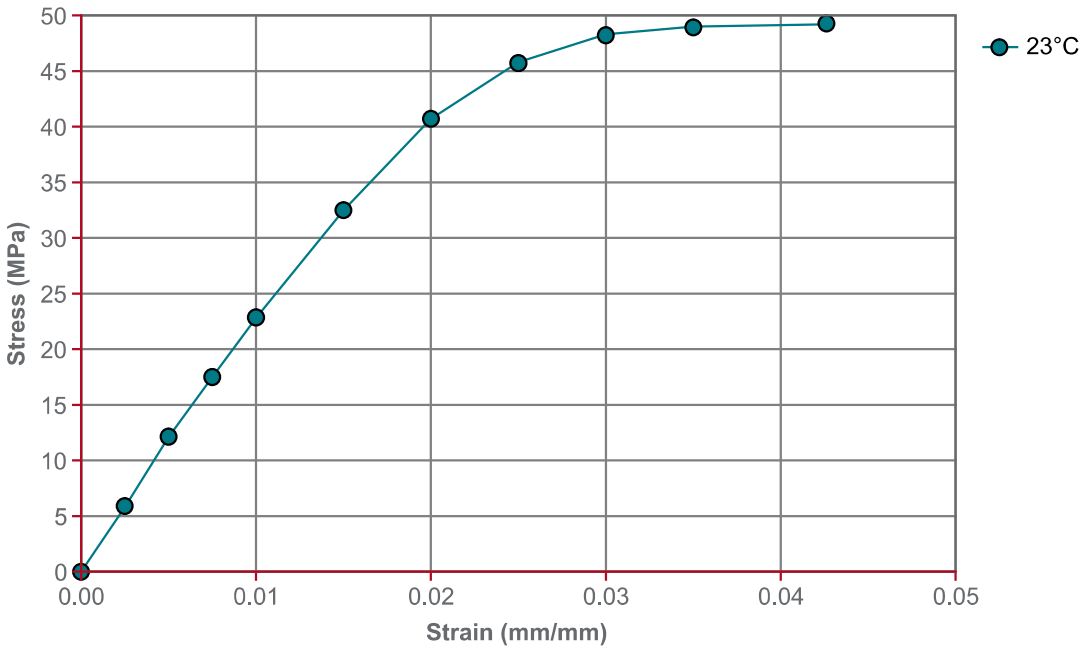
Isothermal Stress vs. Strain (ISO 11403-1)



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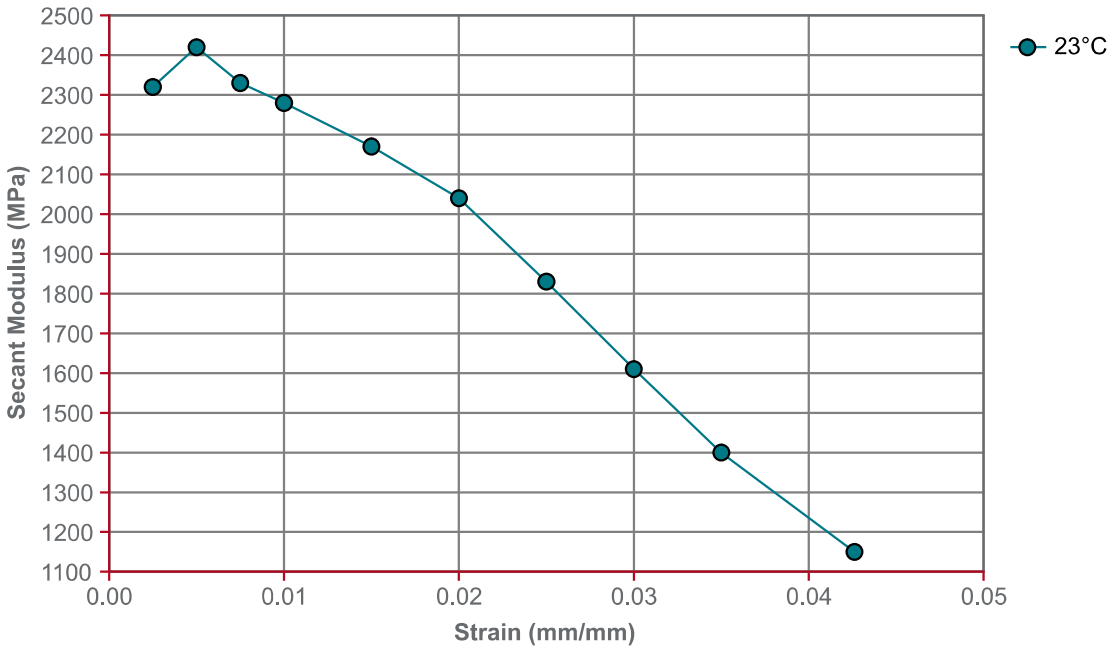
Secant Modulus vs. Strain (ISO 11403-1)



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Added to Prospector: June 2001
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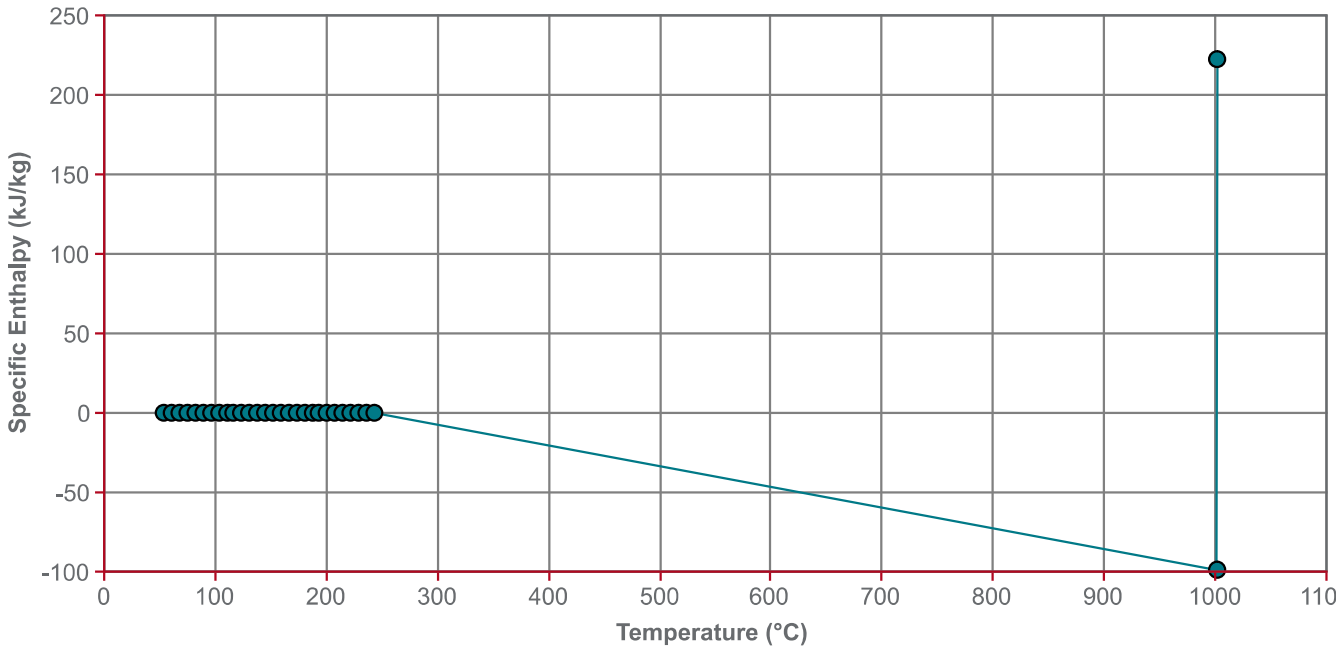
Specific Heat vs. Temperature (ISO 11403-2)



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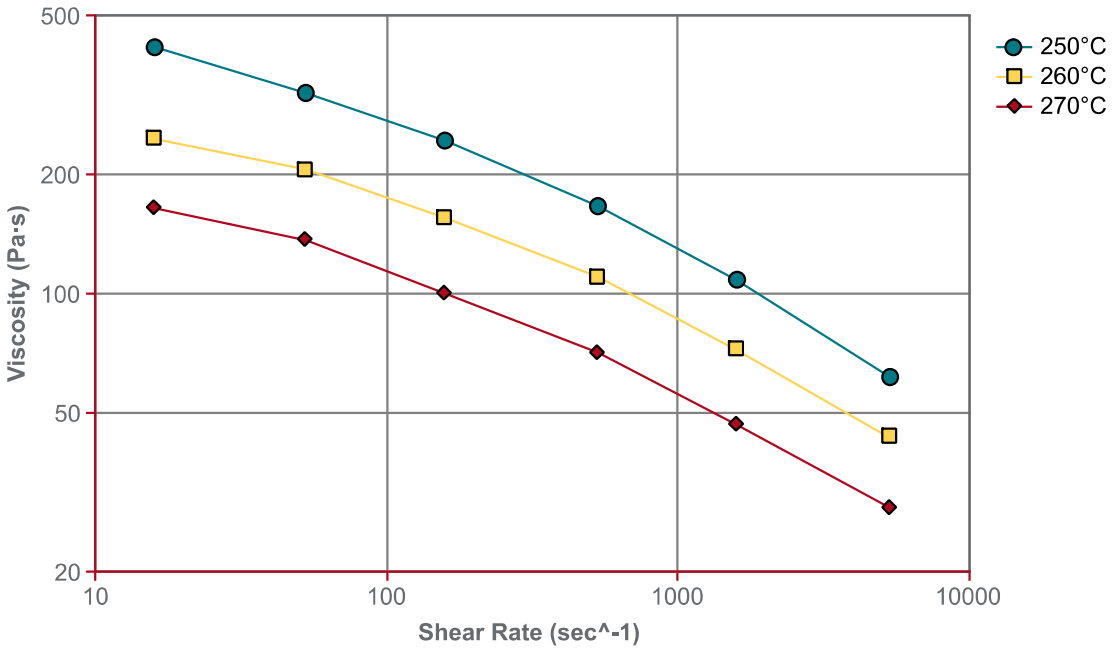
Viscosity vs. Shear Rate (ISO 11403-2)



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