LUPOX® GP2306F

LG Chem Ltd. - Polybutylene Terephthalate

Thursday, November 27, 2025

General Information

Product Description

General Purpose

Application
Automotive Parts, Electrical & Electronic Parts, IT/OA

Material Type
PBT+GF30%

General			
Material Status	• Commercial: Active		
Availability	• Asia Pacific • Europe	• Latin America • North America	
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Uses	• Automotive Applications	• Electrical/Electronic Applications	• General Purpose
Multi-Point Data	• Isothermal Stress vs. Strain (ISO 11403) • Secant Modulus vs. Strain (ISO 11403)	• Specific Heat vs. Temperature (ISO 11403) • Tensile Stress vs. Strain (ASTM D638)	• Viscosity vs. Shear Rate (ISO 11403)

Properties

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity			
-- [1]	1.65	g/cm³	ASTM D792
23°C	1.65	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)			
250°C/2.16 kg	9.0	g/10 min	ASTM D1238
250°C/2.16 kg	8.5	g/10 min	ISO 1133
Molding Shrinkage			ASTM D955 ISO 294-4
Flow : 2.00 mm	0.20 to 0.50	%	
Across Flow : 2.00 mm	0.50 to 1.0	%	
Water Absorption			
24 hr, 23°C, 50% RH	0.050	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.050	%	ISO 62

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
3.20 mm [2]	9320	MPa	ASTM D638
4.00 mm	9800	MPa	ISO 527-1/1
Tensile Strength			
Yield, 3.20 mm [2]	132	MPa	ASTM D638
Yield, 4.00 mm	133	MPa	ISO 527-2/5
Break, 3.20 mm [2]	132	MPa	ASTM D638
Break, 4.00 mm	133	MPa	ISO 527-2/5

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Mechanical	Nominal Value	Unit	Test Method
Tensile Elongation			
Yield, 3.20 mm [2]	2.0	%	ASTM D638
Yield, 4.00 mm	2.0	%	ISO 527-2/5
Break, 3.20 mm [2]	2.0	%	ASTM D638
Break, 4.00 mm	2.0	%	ISO 527-2/5
Flexural Modulus			
3.20 mm [3]	8830	MPa	ASTM D790
4.00 mm [4]	8800	MPa	ISO 178
Flexural Strength			
3.20 mm [3]	196	MPa	ASTM D790
4.00 mm [4]	205	MPa	ISO 178

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179
-30°C, 4.00 mm	7.3	kJ/m²	
23°C, 4.00 mm	7.6	kJ/m²	
Notched Izod Impact			
-30°C, 3.20 mm	61	J/m	ASTM D256
23°C, 3.20 mm	78	J/m	ASTM D256
-30°C, 4.00 mm	7.1	kJ/m²	ISO 180
23°C, 4.00 mm	7.5	kJ/m²	ISO 180

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	120		ASTM D785 ISO 2039-2

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 6.40 mm	219	°C	ASTM D648
0.45 MPa, Unannealed, 4.00 mm	217	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 6.40 mm	207	°C	ASTM D648
1.8 MPa, Unannealed, 4.00 mm	195	°C	ISO 75-2/Af
Vicat Softening Temperature	198	°C	ISO 306/B50 ASTM D1525 [5]
Melting Temperature [6]	223	°C	ISO 11357-3 ASTM D3418
CLTE			
Flow : -30 to 80°C	2.7E-5	cm/cm/°C	ASTM D696
Flow : -30 to 80°C	27	ppm/K	ISO 11359-2
Transverse : -30 to 80°C	9.2E-5	cm/cm/°C	ASTM D696
Transverse : -30 to 80°C	94	ppm/K	ISO 11359-2
RTI Elec			UL 746B
0.100 mm	75.0	°C	
0.71 mm	140	°C	
RTI Imp			UL 746B
0.100 mm	75.0	°C	
0.71 mm	140	°C	
RTI Str			UL 746B
0.100 mm	75.0	°C	
0.71 mm	140	°C	

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Electrical	Nominal Value	Unit	Test Method
Surface Resistivity (23°C)	1.0E+13	ohms	ASTM D257
Volume Resistivity (23°C)	1.0E+15	ohms·cm	ASTM D257
Dielectric Strength (23°C, 2000 µm)	23	kV/mm	ASTM D149
Dielectric Constant (23°C)	3.60		ASTM D150
Arc Resistance	PLC 6		ASTM D495
Comparative Tracking Index (CTI)	PLC 2		UL 746A

Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.71 mm	V-0		
1.5 mm	V-0		
3.3 mm	V-0		

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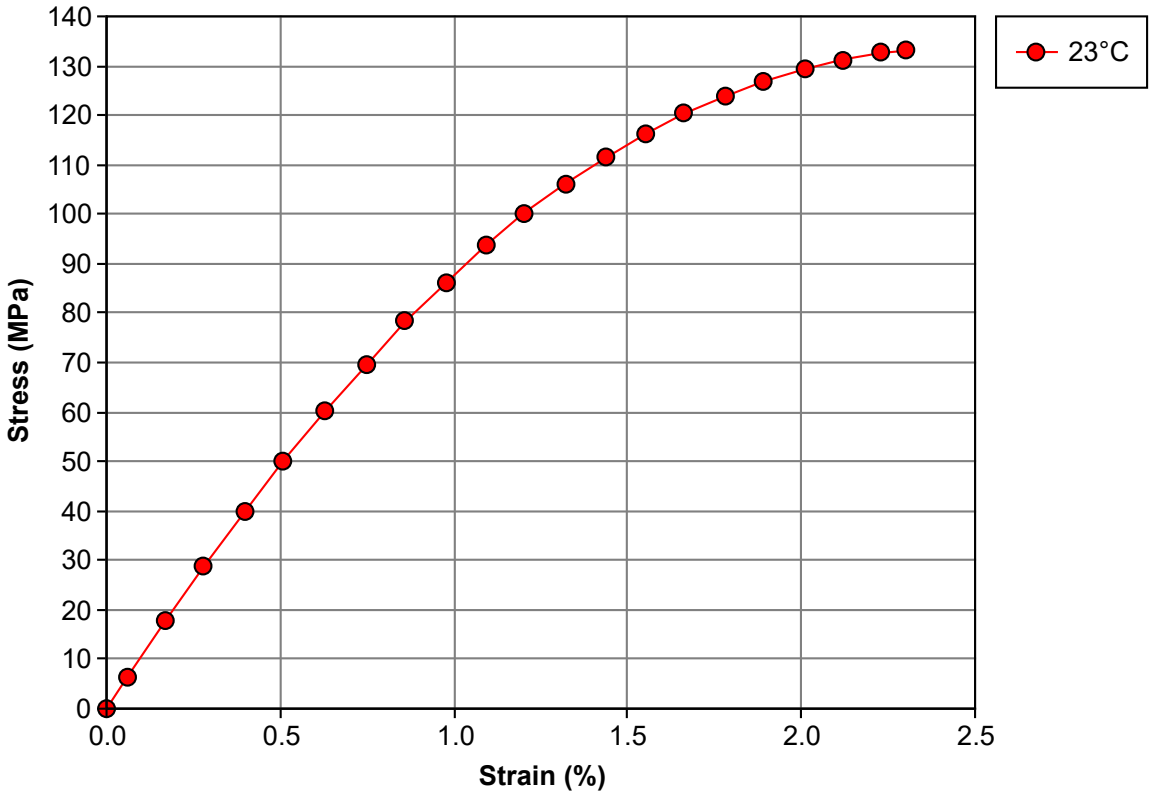
Isothermal Stress vs. Strain (ISO 11403)



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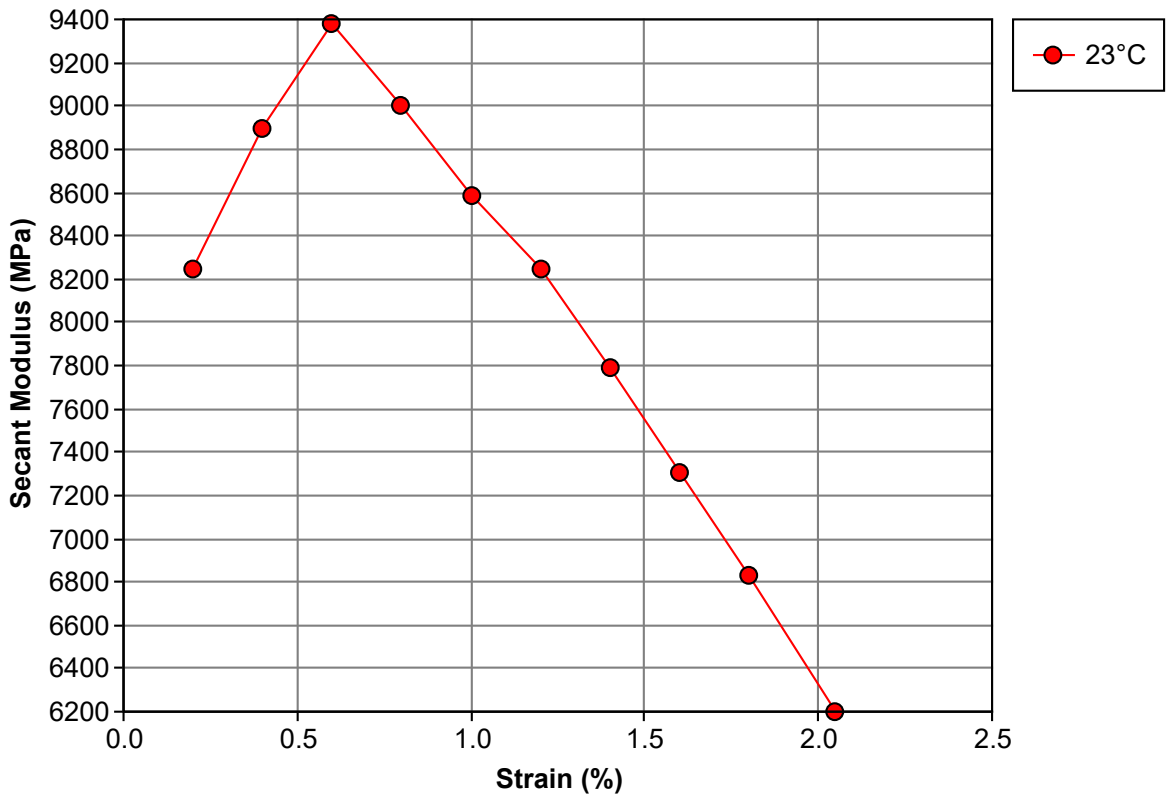
LG Chem Ltd. - Polybutylene Terephthalate

Secant Modulus vs. Strain (ISO 11403)



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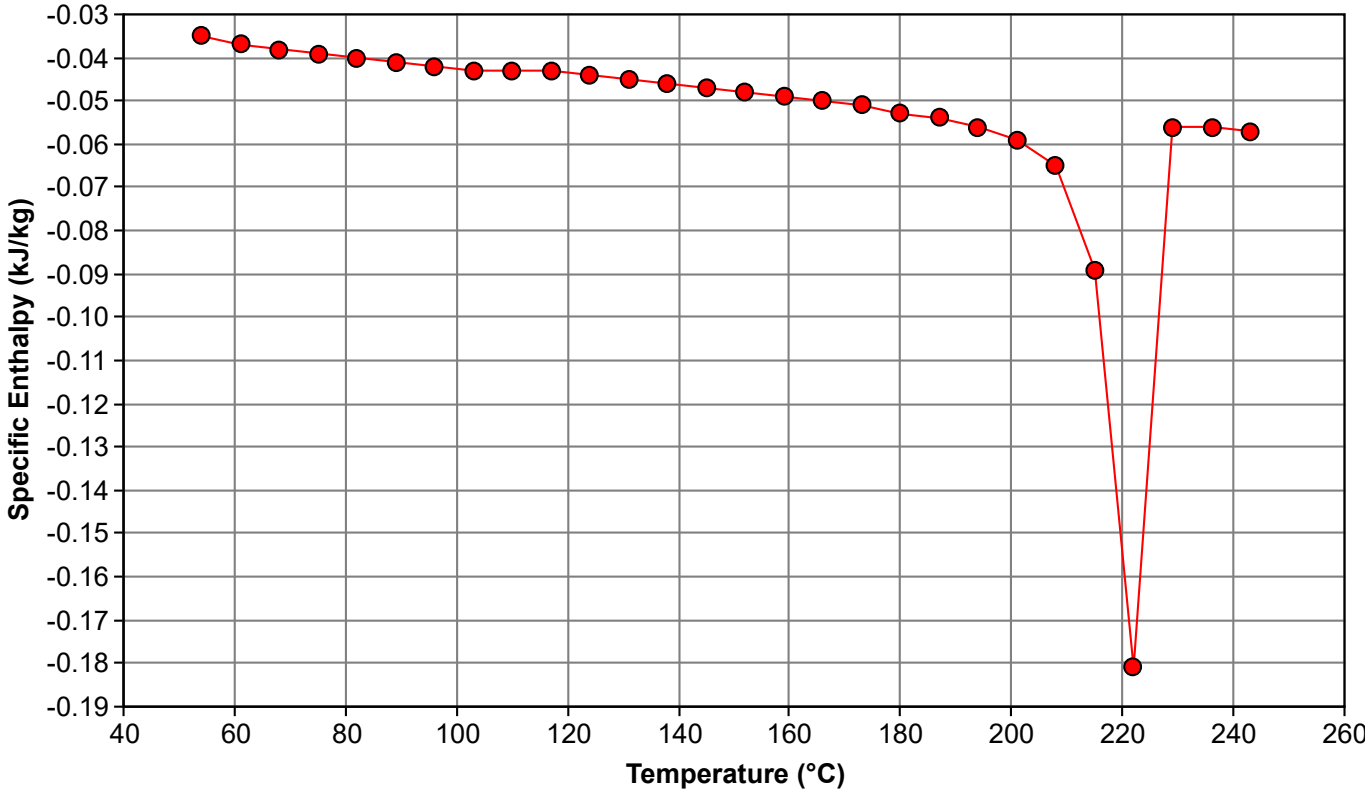
Specific Heat vs. Temperature (ISO 11403)



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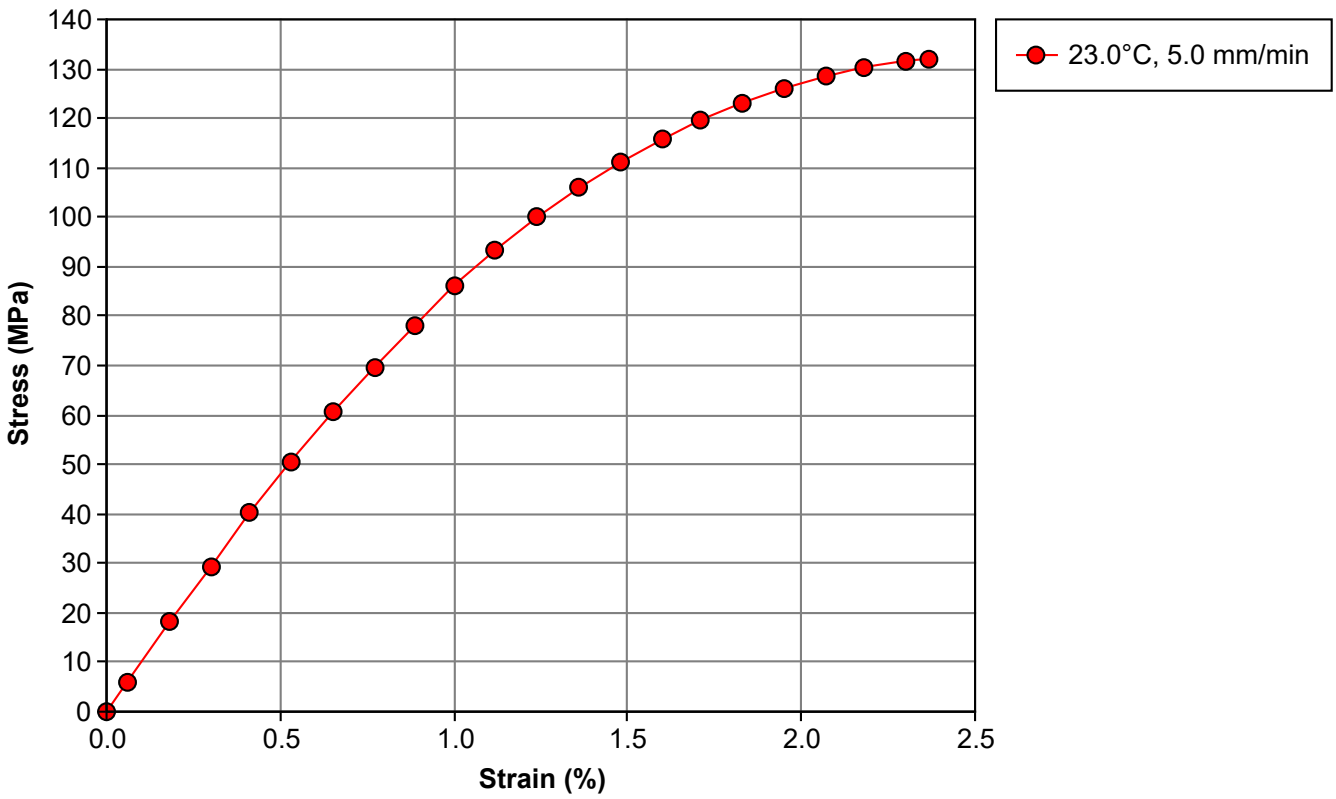
Tensile Stress vs. Strain (ASTM D638)



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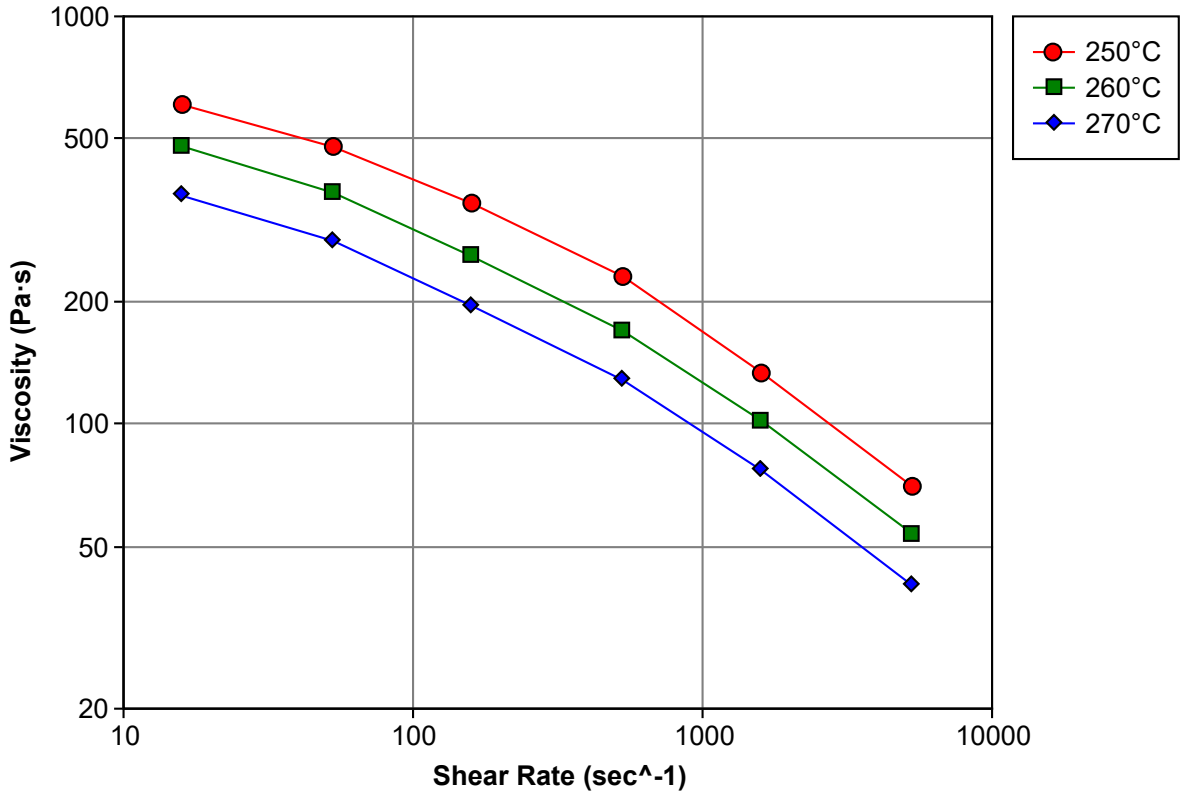
Viscosity vs. Shear Rate (ISO 11403)



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Processing Information		
Injection	**Nominal Value**	**Unit**
Drying Temperature	100 to 120	°C
Drying Time	4.0 to 6.0	hr
Suggested Max Moisture	0.020	%
Rear Temperature	240 to 250	°C
Middle Temperature	240 to 250	°C
Front Temperature	240 to 250	°C
Nozzle Temperature	240 to 260	°C
Processing (Melt) Temp	223	°C
Mold Temperature	60 to 100	°C

Notes

[1] 23°C

[2] 5.0 mm/min

[3] 1.3 mm/min

[4] 2.0 mm/min

[5] Rate A (50°C/h), Loading 2 (50 N)

[6] Peak