

Teijin Kasei America, Inc.



Friday, August 31, 2007

Panlite® LV-2250Z

Teijin Kasei America, Inc. (Teijin Chemicals) - Polycarbonate

Unit System: **Actions****Legend (Open)****General Information****General**

Material Status	Commercial: Active	
Availability	Asia Europe North America	
Test Standards Available	ASTM ISO	
Features	UV Resistance, Good Viscosity, Medium	
Uses	Appliances Electrical/Electronic Applications General Purpose	Lighting Fixtures Parts, Transparent or Translucent
Appearance	Clear	
Forms	Pellets	
Processing Method	Injection Molding	

ASTM and ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density -Specific Gravity	1.20	sp gr 23/23°C	ASTM D792
Density	1.20	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	0.488	in ³ /10min	ISO 1133
Mold Shrink, Linear-Flow	0.0050 to 0.0070	in/in	ASTM D955
Mold Shrink, Linear-Trans	0.0050 to 0.0070	in/in	ASTM D955
Molding Shrinkage			ISO 294-4
(Across Flow)	0.50 to 0.70	%	
(Flow)	0.50 to 0.70	%	
Water Absorption @ 24 hrs (73 °F)	0.20	%	ASTM D570
Water Absorption 24h/23C	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	307000	psi	ASTM D638
Tensile Modulus ²	348000	psi	ISO 527-1, -2
Tensile Strength @ Yield	8990	psi	ASTM D638
Tensile Stress at Yield ³	8850	psi	ISO 527-1, -2
Tensile Strength @ Break	11600	psi	ASTM D638
Tensile Elongation @ Yld	6.0	%	ASTM D638
Tensile Strain at Yield ³	6.0	%	ISO 527-1, -2
Tensile Elongation @ Brk	140	%	ASTM D638
Nominal Tensile Strain at Break ³	50	%	ISO 527-1, -2
Flexural Modulus	323000	psi	ASTM D790
Flexural Modulus ⁴	341000	psi	ISO 178
Flexural Strength ⁴	13500	psi	ISO 178
Flexural Strength @ Yield	13300	psi	ASTM D790
Compressive Strength	11000	psi	ASTM D695
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	36.2	ft·lb/in ²	ISO 179
Charpy Unnotched Impact Strength	No Break	ft·lb/in ²	ISO 179
Notched Izod Impact			ASTM D256
(0.126 in)	16.5	ft·lb/in	
(0.252 in)	2.62	ft·lb/in	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	77		ASTM D785
Thermal	Nominal Value	Unit	Test Method
DTUL @66psi - Unannealed	288	°F	ASTM D648
HDT B (0.45 MPa) Unannealed	288	°F	ISO 75B-1, -2

DTUL @264psi - Unannealed	270 °F	ASTM D648
HDT A (1.80 MPa) Unannealed	264 °F	ISO 75A-1, -2
Vicat Softening Temperature (B50 (50°C/h 50N))	300 °F	ISO 306
CLTE, Flow	0.000039 in/in/°F	ASTM D696
Coefficient of Linear Thermal Expansion, Flow	0.000039 in/in/°F	ISO 11359-1, -2
CLTE, Transverse	0.000039 in/in/°F	ASTM D696
Coefficient of Linear Thermal Expansion, Transverse	0.000039 in/in/°F	ISO 11359-1, -2
Electrical	Nominal Value Unit	Test Method
Surface Resistivity	1.0E+15 ohms	IEC 60093
Volume Resistivity	3.0E+18 ohm-cm	ASTM D257
Volume Resistivity	1.0E+15 ohm-cm	IEC 60093
Dielectric Strength (0.0630 in) ⁵	762 V/mil	ASTM D149
Dielectric Constant		ASTM D150
(60 Hz)	2.950	
(1E+6 Hz)	2.900	
Dissipation Factor		ASTM D150
(60 Hz)	0.00040	
(1E+6 Hz)	0.0090	
Dissipation Factor		IEC 60250
(100 Hz)	0.00100	
(1E+6 Hz)	0.00900	
Arc Resistance	110 sec	ASTM D495
Comp Track Index	230 V	IEC 60112
Electric Strength	760 V/mil	IEC 60243-1
Relative Permittivity		IEC 60250
(100 Hz)	3.10	
(1E+6 Hz)	3.00	
Flammability	Nominal Value Unit	Test Method
Flame Rating - UL (0.0150 in)	V-2	UL 94
UL 746	Nominal Value Unit	Test Method
RTI Str (0.0579 in)	257 °F	UL 746
RTI Imp (0.0579 in)	239 °F	UL 746
RTI Elec (0.0579 in)	257 °F	UL 746
Comparative Tracking Index (CTI)	300 V	UL 746
Optical	Nominal Value Unit	Test Method
Refractive Index	1.585	ASTM D542
Transmittance (118 mil)	88.0 %	ASTM D1003
Additional Properties		
Electric Strength, IEC 60243-1, Short Time Test: 30 MV/m		

Processing Information

Injection	Nominal Value Unit
Drying Temperature	212 to 248 °F
Drying Time	5.0 hr
Suggested Max Moisture	0.020 %
Processing (Melt) Temp	500 to 608 °F
Mold Temperature	176 to 248 °F

Notes

- 1 Typical properties: these are not to be construed as specifications.
- 2 0.039 in/min
- 3 2.0 in/min
- 4 0.079 in/min
- 5 Method C (Slow Rate-of-Rise)

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