

Teijin Kasei America, Inc.



Friday, August 31, 2007

Panlite® L-1250ZW

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	Film General Purpose	Parts, Transparent or Translucent Sheet
Appearance	Clear	
Forms	Pellets	
Processing Method	Extrusion Extrusion, Film	Extrusion, Sheet 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)	0.427	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 ²	348000	psi	ISO 527-1, -2
Tensile Strength @ Yield	8990	psi	ASTM D638
Tensile Stress at Yield ³	8990	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	328000	psi	ASTM D790
Flexural Modulus ⁴	341000	psi	ISO 178
Flexural Strength ⁴	13500	psi	ISO 178
Flexural Strength @ Yield	13100	psi	ASTM D790
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 (0.126 in)	17.4	ft-lb/in	ASTM D256
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	77		ASTM D785
Thermal	Nominal Value	Unit	Test Method
HDT B (0.45 MPa) Unannealed	288	°F	ISO 75B-1, -2
DTUL @264psi - Unannealed	268	°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	250	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			UL 94
(0.0591 in)		HB	
(0.0157 in)		V-2	
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			

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)

Teijin Kasei America, Inc. (770)346-8949



Copyright ©, 2007 [IDES - One Source. Plastics Data.](#)

The information presented on this data sheet was acquired by IDES from various sources, including the producer of the material and recognized testing agencies. In some cases, material updates have been integrated directly into the IDES Plastics Database by the material producer utilizing the [Data Maintenance Tool](#). IDES makes substantial efforts to assure the accuracy of this data. However, IDES assumes no responsibility for the data values and urges that upon final material selection, data points are validated with the manufacturer.