

Teijin Kasei America, Inc.



Panlite® L-1250ZW

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

Actions

General Information

General

Material Status	1	Commercial: Active
Availability	1	Asia
	1	Europe
	1	North America
Test Standards Available	1	ASTM
	1	ISO
Features	1	UV Resistance, Good
	1	Viscosity, Medium
Uses	1	Film
	1	General Purpose
	1	Parts, Transparent or Translucent
	1	Sheet
Appearance	1	Clear
Forms	1	Pellets
Processing Method	1	Extrusion
	1	Extrusion, Film
	1	Extrusion, Sheet
	1	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)			