

Teijin Chemical Ltd. is well known as one of the leading manufacturer of Polycarbonate (PC). Its brand name is Panlite®.

The global market for polycarbonate resin can be divided into advanced products for optical discs-the Teijin Group's specialty-and general-use products.

In 1999 Teijin Chemical Ltd. intended to strengthen its presence in Europe in the latter segment, which is considerably larger than the volumes consumed for optical discs.

Teijin is mainly focussing on developing products for use in the office automation, automotive, lighting and appliances. Polycarbonate resin, a type of polyester, is the world's most important engineering plastic in terms of production volume. Strong and lightweight, polycarbonate resin boasts an impact resistance more than 200 times that of glass and weighs only half as much as glass. Other properties include excellent heat and weather resistance, transparency and thermal insulation. It is also easy to process. Polycarbonate resin is suitable for a wide range of applications.

Property	Unit	Test method	Measurement condition	Standard (mould release/bluing)					Weather resistant grade (acquired SAE standard)	
				Panlite L1225L	Panlite L1225Y	Panlite L1250Y	Panlite L1225ZL	Panlite L1225Z	Panlite L1250Z	
Melt volume flow rate	cm <sup>3</sup> /10 min	ISO 1133	300°C load 1,2 kg	18	11	8	25	11	8	
Water absorption rate	%	ISO62	in water 23°C 24 h	0,2	0,2	0,2	0,2	0,2	0,2	
Light transmission	%	ASTM D1003	thickness 3mm	88	88	88	88	88	88	
Refractive index	-	ASTM D542	-	1,585	1,585	1,585	1,585	1,585	1,585	
Tensile modulus	MPa	ISO 527-1 and ISO 527-2	1mm/min	2400	2400	2400	2400	2400	2400	
Tensile yield strength	MPa	SO 527-1 and ISO 527-2	50mm/min	61	62	61	62	61	61	
Tensile yield distortion	%	SO 527-1 and ISO 527-2	50mm/min	6	6	6	6	6	6	
Flexual modulus	MPa	ISO 178	2mm/min	2350	2350	2300	2400	2400	2350	
Flexual strenght	MPa	ISO 178	2mm/min	93	92	91	95	94	93	
Charpy impact strength	KJ/m <sup>2</sup>	ISO 179	unnotched	NB	NB	NB	NB	NB	NB	
Charpy impact strength	KJ/m <sup>2</sup>	ISO 179	notched	67	71	76	13	71	76	
Load-deflection temperature	°C	ISO 75-1 and ISO 75-2	1,80 MPa	126	128	129	123	128	129	
Load-deflection temperature	°C	ISO 75-1 and ISO 75-2	0,45 MPa	139	141	142	136	141	142	
Vicat softening temperature	°C	ISO 306	50°C/h 50N	146	148	149	142	148	149	
Mold shrinkage	%	In house method	parallel	0,5-0,7	0,5-0,7	0,5-0,7	0,5-0,7	0,5-0,7	0,5-0,7	
Mold shrinkage	%	In house method	vertical	0,5-0,7	0,5-0,7	0,5-0,7	0,5-0,7	0,5-0,7	0,5-0,7	
Volume resistivity	Ω*m	ICE 60093	-	>1x10 <sup>13</sup>	>1x10 <sup>13</sup>	>1x10 <sup>13</sup>	>1x10 <sup>13</sup>	>1x10 <sup>13</sup>	>1x10 <sup>13</sup>	
Surface resistivity	Ω	ICE 60093	-	>1x10 <sup>15</sup>	>1x10 <sup>15</sup>	>1x10 <sup>15</sup>	>1x10 <sup>15</sup>	>1x10 <sup>15</sup>	>1x10 <sup>15</sup>	
Heat durability	-	UL94	-	V-2 (0.40mm)	V-2 (0.40mm)	V-2 (0.40mm)	V-2 (0.40mm)	V-2 (0.40mm)	V-2 (0.40mm)	
Heat durability	-	UL94	-	HB (1.9mm)	HB (1.9mm)	HB (1.5mm)	HB (1.9mm)	HB (1.9mm)	HB (1.5mm)	

The values listed are specification values, not certified values. Please feel free to contact us for further requests.