

PC1301V-10

Description

It is designed for injection molding with high impact strength, good flame-retardancy and transparency.

Application

E&E Others, Sundry Goods

Key Features

Good Mold Release, High Impact Resistance, High Transparency, Non-Halogen

Properties	Method	Unit	PC1301V-10
Physical			
Melt Flow Rate (300 °C /1.2 kg)	ASTM D1238	g/10min	10
Density	ASTM D792	kg/m³	1200
Mold Shrinkage	ASTM D955	mm/mm	0.005~0.007
Water Absorption @ 24 hrs, 23°C	ASTM D570	%	0.15
Water Absorption @ equilibrium, 50%RH, 23°C	ASTM D570	%	0.32
Optical			
Refractive Index, nD	ASTM D542		1.586
Light Transmittance	ASTM D1003	%	89
Haze	ASTM D1003	%	0.7~1.5
Thermal			
Deflection Temperature Under Load (DTUL) @ 4 mm 66 psi (0.45 MPa), annealed	ASTM D648	°C	144
Deflection Temperature Under Load (DTUL) @ 4 mm 264 psi (1.8 MPa), annealed	ASTM D648	°C	141
Deflection Temperature Under Load (DTUL) @ 4 mm 264 psi (1.8 MPa), unannealed	ASTM D648	°C	128
Vicat Softening Point, 50°C /hr, 50N Load	ASTM D1525	°C	149
Coefficient of Linear Thermal Expansion, @ -40 to 82°C	ASTM D696	mm/mm/°C	68 x 10 ⁻⁶
Mechanical			
Tensile Yield Strength	ASTM D638	MPa	60
Ultimate Tensile Strength	ASTM D638	MPa	71
Elongation at Yield	ASTM D638	%	6
Elongation at Break	ASTM D638	%	150
Tensile Modulus	ASTM D638	MPa	2410
Flexural Strength	ASTM D790	MPa	96
Flexural Modulus	ASTM D790	MPa	2410
Notched Izod Impact @ 23 °C	ASTM D256	J/m	900
Unnotched Izod Impact @ 23 °C	ASTM D256		No break
Instrumented Dart Impact, Total Energy @ 23 °C	ASTM D3763	J	87
Rockwell Hardness @ R Scale	ASTM D785	R Scale	118
Rockwell Hardness @ M Scale	ASTM D785	M Scale	73
Taber Abrasion Resistance (D Haze)	ASTM D1044	%	45
Ignition Resistance			
UL-94 @ 1.6 mm	ASTM D635		V-2
UL-94 @ 3.0 mm	ASTM D635		V-2
Limiting Oxygen Index	ASTM D2863	%	26
Ball Indentation Temperature	IEC 598-1	°C	>125
Average Extent of Burning	ASTM D635	mm	25

Electrical

GWT 2.0 mm, 5 second	IEC 695-2-1	°C	850
Comparative Tracking Index @ 2.0 mm	IEC 112	V	250
Dielectric Strength	ASTM D149	KV/mm	17
Dielectric Constant @ 60 Hz	ASTM D150		3
Dissipation Factor @ 60 Hz	ASTM D150		0.001
Volume Resistivity @ 23 °C, dry	ASTM D257	W-cm	2.0 x 10 ¹⁷

Note

1. UL-94 V2 rating; file number: E67171
2. Typical properties; not to be constructed as specifications.
3. Tensile Test @ 23 °C; 50 mm/min.
4. 0.125 in; 10 mil notch (3.2 mm; 0.25 mm notch).
5. 0.125 in; 8000 ipm (3.2 mm; 203 m/min).
6. 1,000 g; CS-10 F wheel; 500 cycles.
7. These numerical flame spread ratings are small-scale test values and are not intended to reflect hazards presented by these or any other materials under actual fire conditions. UL 94 file: E67171.

※ Typical values are only for material selection purpose, and variation within normal tolerances are for various colors.

Values given should not be interpreted as specification and not be used for part or tool design.

All properties, except melt flow rate are measured on injection molded specimens and after 48 hours storage at 23°C, 50% relative humidity.