PC 1302-05

Description

It is designed for sheet extrusion with high impact strength, UV stability and transparency.

Key Features

High Impact Resistance, High Transparency, Weather Resistance

Properties	Method	Unit	PC 1302-05
Physical			
Melt Flow Rate (300 °C /1.2 kg)	ASTM D1238	g/10min	5
Density	ASTM D792	kg/m³	1200
Mold Shrinkage	ASTM D955	㎜/㎜	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	℃	146
Deflection Temperature Under Load (DTUL) @ 4 mm 264 psi (1.8 MPa), annealed	ASTM D648	℃	143
Deflection Temperature Under Load (DTUL) @ 4 mm 264 psi (1.8 MPa), unannealed	ASTM D648	℃	132
Vicat Softening Point, 50°C /hr, 50N Load	ASTM D1525	℃	151
Coefficient of Linear Thermal Expansion, @ -40 to 82°C	ASTM D696	mm/mm/℃	68 x 10^-6
Mechanical			
Tensile Yield Strength	ASTM D638	MPa	60
Ultimate Tensile Strength	ASTM D638	MPa	72
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	950
Unnotched Izod Impact @ 23 °C	ASTM D256		No break
Instrumented Dart Impact, Total Energy @ 23 °C	ASTM D3763	J	94
Rockwell Hardness @ R Scale	ASTM D785	R Scale	118
Rockwell Hardness @ M Scale	ASTM D785	M Scale	74
Taber Abrasion Resistance (D Haze)	ASTM D1044	%	45
Ignition Resistance			
UL-94 @ 0.5 mm	ASTM D635		V-2
UL-94 @ 1.6 mm	ASTM D635		V-2
UL-94 @ 2.5 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	℃	>125
Average Extent of Burning	ASTM D635	mm	25
Electrical			
GWT 2.0 mm, 5 second	IEC 695-2-1	℃	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. The addition of an UV stabilizer to a resin does not completely eliminate the effects of UV exposure but to slow down the rate at which the effects occur. These effects may include color shift, decreased mechanical properties, and/or optical properties. Actual results may very depending on application and other factors such as resin color, transparency and additives. Therefore, actual end-use testing is recommended.
2. Typical properties; not to be constructed as specifications.
3. 0.125 in; 10 mil notch (3.2 mm; 0.25 mm notch).
4. 0.125 in; 8000 ipm (3.2 mm; 203 m/min).
5. 1,000 g; CS-10 F wheel; 500 cycles.
6. 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℃, 50% relative humidity.

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