



PC 122

Product description				
Material designation	>PC<			
Colour	Natural colour			
UL file number	E56070			
Application	Ball pen clad, stationery, toys, water containers, thin wall products, complex shaped transparent products			
Material properties	High mobility			
Material shape	Pellet			
Processing method	Injection molding			
Physical property	Condition	Test standard	Data	Unit
Specific Gravity		ASTM D792	1.20	g/cm ³
Shrinkage rate	MD2.0mm	ASTM D995	0.60	%
Shrinkage rate	TD2.0mm	ASTM D995	0.60	%
Water absorption rate	(23°C,24hr)	ASTM D570	0.20	%
Melt flow rate	300°C1.2Kg	ASTM D570	22	g/10min
Hardness	Condition	Test standard	Data	Unit
HR		ASTM D785	77	R
Mechanical property	Condition	Test standard	Data	Unit
Tensile Strength	23°C	ASTM D638	61.80	MPa
Elongation at Break	23°C	ASTM D638	90	%
Flexural strength	23°C	ASTM D790	90.20	MPa
Flexural Modulus	23°C	ASTM D790	2350	MPa
optical performance	Condition	Test standard	Data	Unit
Refractive index		ASTM 542	1.59	
Transmissivity	76200um	ASTM D1003	89.0	%
Haze	81300um	ASTM D1003	0.80	%
Thermal property	Condition	Test standard	Data	Unit
Heat deflection temperature	0.45MPa No annealing	ASTM D648	136	°C
Heat deflection temperature	1.80MPa No annealing	ASTM D648	125	°C
Vicat Softening Temperature		ASTM 1525	150	°C
Linear expansion coefficient	MD	ASTM D696	6.0E -5	cm/cm/°C
Linear expansion coefficient	TD	ASTM D696	8.0E -5	cm/cm/°C
Thermal conductivity		JIS R2618	0.20	W/m/K
Electrical properties	Condition	Test standard	Data	Unit
Volume resistance		ASTM D257	3.0E +16	Ω.cm
Insulation strength		ASTM D149	30	KV/mm
Dielectric constant		ASTM D150	2.90	1 MHz
Flame resistance	Condition	Test standard	Data	Unit
Fire protection grade		UL-94	0.38mm	V-2
Fire protection grade		UL-94	1.60mm	V-2
Fire protection grade		UL-94	3.20mm	V-2
Other performance	Condition	Test standard	Data	Unit
Drying temperature			120-	°C
Drying time			4.0	Hr
Injection temperature	Rear of spiral tube		220-300	°C
Injection temperature	Middle of spiral tube		240-310	°C
Injection temperature	Front of spiral tube		240-300	°C
Die head temperature			240-300	°C
Mold temperature			70.0-120	°C