



Handan Shibo New Materials Co., LTD.

General description of PC 122U

Material Shape	Pellets		
Process	Injection molding		
FR	V-2		
Material Attribute	UV resistance grade		
Specification	• EC 1907/2006(REACH) • RoHS UL • UL-746C F2		
Features	High flow		
Application	• Auto headlamp shade • Automotive parts • Office Applications • Outdoor Cactivities Applications • E& E housing • Toys parts • Construction Applications • Safety helmet • Signage • Home Appliances housing • Lampshade • Lighting Applications • Industrial Applications • Luggage • Compacting equipment • Thin wall products • Thin-wall container • Outdoor applications		
Additives	UV Stabilizer		
Physical property	Standard	Value	Unit
Density 23℃	ASTM D792	1.2	g/cm ³
Density 23℃	ISO 1183	1.2	g/cm ³
Shrinkage	ISO 294	0.5~0.7	%
Melt Index 300℃ 1.2kg	ASTM D1238	22.0	g/10min
Melt Index 300℃ 1.2kg	ISO 1133	22	cm ³ /10min
Hardness	Standard	Value	Unit
Rockwell Hardness M(Scale)	ASTM D785	77	
Mechanical behavior	Standard	Value	Unit
Tensile Strength Yield 6mm/min	ASTM D638	630	kg/cm ²
Tensile Strength Yield 50mm/ min	ISO 527	63	MPa
Tensile Strength Break 50mm/min	ISO 527	70	MPa
Elongation 6mm/min	ASTM D638	110	%
Elongation 50mm/min	ISO 527	120	%
Flexural Strength 1.3mm/min	ASTM D790	920	kg/cm ²
Flexural Strength 2.0mm/min	ISO 178	90	MPa
Flexural Modulus 1.3mm/min	ASTM D790	224000	kg/cm ²
Flexural Modulus 2.0mm/min	ISO 178	2.4	MPa
Izod Notch Impact 23℃ 3.2mm	ASTMD256	80	kg-cm/cm
Izod Notch Impact 23℃	ISO 180	60	kJ/m ²
Charpy Notch Impact 23℃	ISO 179	60	kJ/m ²
Optical property	Standard	Value	Unit
Hazw(3.2mm)	ASTM D1003	<0.5	%
Transmittance(3.2mm)	ASTM D1003	89	%
YI(380-780mm)	ISO 17223	<0.4	
Thermal	Standard	Value	Unit
HDT Annealed 0.45MPa Annealed at 132℃ for 8 hours	ASTM D648	143	℃
HDT Unannealed 1.8MPa	ISO 75	127	℃
HDT Annealed 1.8MPa	ISO 75	142	℃
Vicat Softening Temperature 50℃/hr 10N	ASTM D1525	148	℃
Vicat Softening Temperature 50℃/hr 10N	ISO 306	148	℃
Vicat Softening Temperature 50℃/hr 10N	ISO 306	143	℃
CLE	ISO 11359	6E-5~8E-5	cm/cm/℃
Flammability	Standard	Value	Unit
Flame Rating All Color 0.75mm	UL94	V-2	
Flame Rating All Color 3.0mm	UL94	V-2	
UL	Standard	Value	Unit
Outdoor Suitability	UL-746C	ƒ2	℃
UL FlameRating ALL 0.75mm	UL 94	V-2	
UL FlameRating ALL 3.0mm	UL 94	V-2	
HWI ALL 0.75mm	UL 746A	4	PLC
HWI ALL 3.0mm	UL 746A	2	PLC
HAI ALL 0.75mm	UL 746A	1	PLC
HAI ALL 3.0mm	UL 746A	0	PLC
RTI Elec ALL 0.75mm	UL 746B	120	℃
RTI Elec ALL 3.0mm	UL 746B	120	℃
RTI Imp ALL 0.75mm	UL 746B	105	℃
RTI Imp ALL 3.0mm	UL 746B	105	℃
RTI Str ALL 0.75mm	UL 746B	120	℃
RTI Str ALL 3.0mm	UL 746B	120	℃
Comparative Tracking Index	IEC 60112	2	PLC
HVTR	UL 746A	2	PLC
Arc Resistance	ASTM D495	6	PLC