VALOX™ 357U resin

Polycarbonate + PBT

SABIC Innovative Plastics

Message:

PBT+PC, UL94V-0/5VA Rated, Impact Modified, Opaque, Unreinforced, UV Stabilized. Applications like bobbins, switches and enclosures.

General Information		
UL YellowCard	E121562-100036617	E121562-220786
Additive	Impact Modifier	
	UV Stabilizer	
Features	Good UV Resistance	
	Impact Modified	
Uses	Bobbins	
	Housings	
	Switches	
Appearance	Opaque	
Processing Method	Injection Molding	
Multi-Point Data	Instrumented Impact (Energy) (ASTM D3763)	
	Instrumented Impact (Load) (ASTM D3763)	
	Viscosity vs. Shear Rate (ASTM D3835)	

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.34	g/cm³	ASTM D792
Specific Volume	0.750	cm³/g	ASTM D792
Molding Shrinkage			Internal Method
Flow [1]	0.80 to 1.1	%	
Flow [2]	1.0 to 1.4	%	
Across Flow [3]	0.90 to 1.3	%	
Across Flow [4]	1.2 to 1.6	%	
Water Absorption (24 hr)	0.080	%	ASTM D570
Outdoor Suitability	f2		UL 746C
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale)	117		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength [5]			ASTM D638
Yield	48.3	MPa	
Break	48.3	MPa	

Tensile Elongation [6] (Break)	110	%	ASTM D638
Flexural Modulus [7] (50.0 mm Span)	2070	MPa	ASTM D790
Flexural Strength [8]			ASTM D790
Yield, 50.0 mm Span	82.7	MPa	
Break, 50.0 mm Span	82.7	MPa	
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	530	J/m	ASTM D256
Unnotched Izod Impact (23°C)	3200	J/m	ASTM D4812
Gardner Impact			ASTM D3029
23°C	43.4	J	
23°C [9]	43.4	J	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	138	°C	
1.8 MPa, Unannealed, 6.40 mm	98.9	°C	
CLTE - Flow			ASTM E831
-40 to 40°C	9.2E-5	cm/cm/°C	
60 to 138°C	1.2E-4	cm/cm/°C	
RTI Elec	120	°C	UL 746
RTI Imp	120	°C	UL 746
RTI Str	140	°C	UL 746
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	> 1.2E+16	ohms·cm	ASTM D257
Dielectric Strength			ASTM D149
1.60 mm, in Oil	25	kV/mm	
3.20 mm, in Air	19	kV/mm	
3.20 mm, in Oil	19	kV/mm	
Dielectric Constant			ASTM D150
100 Hz	3.20		
1 MHz	3.20		
Dissipation Factor			ASTM D150
100 Hz	3.0E-3		
1 MHz	0.030		
Arc Resistance [10]	PLC 6		ASTM D495
Comparative Tracking Index (CTI)	PLC 2		UL 746
High Amp Arc Ignition (HAI)	PLC 3		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 3		UL 746
Hot-wire Ignition (HWI)	PLC 2		UL 746
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
0.460 mm	HB		
0.640 mm	V-0		

3.00 mm	5VA		
Oxygen Index	30	%	ASTM D2863

Injection	Nominal Value	Unit
Drying Temperature	121	°C
Drying Time	3.0 to 4.0	hr
Drying Time, Maximum	12	hr
Suggested Max Moisture	0.020	%
Suggested Shot Size	40 to 80	%
Rear Temperature	238 to 254	°C
Middle Temperature	243 to 260	°C
Front Temperature	249 to 266	°C
Nozzle Temperature	243 to 260	°C
Processing (Melt) Temp	249 to 266	°C
Mold Temperature	48.9 to 76.7	°C
Back Pressure	0.345 to 0.689	MPa
Screw Speed	50 to 100	rpm
Vent Depth	0.025 to 0.038	mm

NOTE	
1.	0.75 to 2.3 mm
2.	2.3 to 4.6 mm
3.	0.75 to 2.3 mm
4.	2.3 to 4.6 mm
5.	Type I, 50 mm/min
6.	Type I, 50 mm/min
7.	1.3 mm/min
8.	1.3 mm/min
9.	Modified
10.	Tungsten Electrode

Recommended distributors for this material

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