VALOX™ 553U resin

Polycarbonate + PBT

SABIC Innovative Plastics

Message:

30% GR PBT+PC, UL94 V-0. Reduced warpage characteristics.Applications; appliance handles, spotlights, electric motors, pump housings, etc.

General Information			
UL YellowCard	E121562-220803		
Filler / Reinforcement	Glass Fiber,30% Filler by Weight		
Features	Low Warpage		
Uses	Appliance Components Electric Motor Housings Handles Housings Pump Parts		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.58	g/cm³	ASTM D792
Specific Volume	0.636	cm³/g	ASTM D792
Molding Shrinkage			Internal Method
Flow [1]	0.30 to 0.50	%	
Flow [2]	0.50 to 0.80	%	
Across Flow [3]	0.40 to 0.60	%	
Across Flow [4]	0.60 to 0.90	%	
Water Absorption (24 hr)	0.070	%	ASTM D570
Outdoor Suitability	f1		UL 746C
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale)	118		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength [5] (Break)	110	MPa	ASTM D638
Flexural Modulus [6] (50.0 mm Span)	6890	MPa	ASTM D790
Flexural Strength [7] (Break, 50.0 mm Span)	179	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	85	J/m	ASTM D256
Unnotched Izod Impact (23°C)	640	J/m	ASTM D4812
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	204	°C	
1.8 MPa, Unannealed, 6.40 mm	160	°C	

CLTE - Flow			ASTM E831
-40 to 40°C	2.2E-5	cm/cm/°C	
60 to 138°C	2.2E-5	cm/cm/°C	
RTI Elec	125	°C	UL 746
RTI Imp	110	°C	UL 746
RTI Str	125	°C	UL 746
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	4.3E+16	ohms·cm	ASTM D257
Dielectric Strength			ASTM D149
1.60 mm, in Oil	26	kV/mm	
3.20 mm, in Air	19	kV/mm	
Dielectric Constant			ASTM D150
100 Hz	3.80		
1 MHz	3.70		
Dissipation Factor			ASTM D150
100 Hz	2.0E-3		
1 MHz	0.020		
Arc Resistance [8]	PLC 6		ASTM D495
Comparative Tracking Index (CTI)	PLC 3		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 1		UL 746
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
0.864 mm	V-0		
2.31 mm	5VA		
Oxygen Index	37	%	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	65.6 to 87.8	°C	
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	50 to 80	rpm	
Vent Depth	0.025 to 0.038	mm	

NOTE	
1.	1.5 to 3.2 mm
2.	3.2 to 4.6 mm
3.	1.5 to 3.2 mm
4.	3.2-4.6 mm
5.	Type I, 5.0 mm/min
6.	1.3 mm/min
7.	1.3 mm/min
8.	Tungsten Electrode

Recommended distributors for this material

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