

VALOX™ 3706 resin

Polycarbonate + PBT

SABIC Innovative Plastics

Message:

Impact modified PBT+PC resin. Outdoor enclosure. Not available in all colors.

General Information			
UL YellowCard	E121562-100626858	E121562-220842	E121562-220843
Additive	Impact Modifier		
Features	Impact Modified		
Uses	Outdoor Applications		
Processing Method	Injection Molding		
Multi-Point Data	Coefficient of Thermal Expansion vs. Temperature (ASTM E831)		
	Flexural DMA (ASTM D4065)		
	Shear DMA (ASTM D4065)		
	Specific Heat vs. Temperature (ASTM D3417)		
	Tensile Creep (ASTM D2990)		
	Tensile Fatigue		
	Tensile Stress vs. Strain (ASTM D638)		
	Thermal Conductivity vs. Temperature (ASTM E1530)		
	Viscosity vs. Shear Rate (ASTM D3835)		

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.30	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (266°C/5.0 kg)	19	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (265°C/5.0 kg)	17.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Flow : 3.20 mm	1.2 to 1.4	%	
Across Flow : 3.20 mm	1.2 to 1.4	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	1970	MPa	ASTM D638
Tensile Strength ²			ASTM D638
Yield	49.0	MPa	
Break	39.3	MPa	
Tensile Elongation ³			ASTM D638
Yield	6.0	%	
Break	50	%	
Flexural Modulus ⁴ (50.0 mm Span)	2000	MPa	ASTM D790
Flexural Strength ⁵ (Yield, 50.0 mm Span)	78.6	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	670	J/m	ASTM D256
Instrumented Dart Impact (23°C, Total Energy)	49.7	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 3.20 mm	127	°C	
1.8 MPa, Unannealed, 3.20 mm	85.0	°C	
Vicat Softening Temperature	135	°C	ASTM D1525 ⁶
CLTE			ASTM E831
Flow : -40 to 40°C	7.9E-5	cm/cm/°C	
Transverse : -40 to 40°C	8.6E-5	cm/cm/°C	
RTI Elec	100	°C	UL 746
RTI Imp	85.0	°C	UL 746
RTI Str	100	°C	UL 746
Electrical	Nominal Value		Test Method
Arc Resistance ⁷	PLC 6		ASTM D495
Comparative Tracking Index (CTI)	PLC 2		UL 746
High Amp Arc Ignition (HAI)	PLC 0		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 4		UL 746
Hot-wire Ignition (HWI)	PLC 2		UL 746
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
1.50 mm	V-0		
2.49 mm	5VA		
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.	50 mm/min		

2.	Type I, 50 mm/min
3.	Type I, 50 mm/min
4.	1.3 mm/min
5.	1.3 mm/min
6.	Rate B (120°C/h), Loading 2 (50 N)
7.	Tungsten Electrode

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519
Phone: +86 13424755533
Email: sales@su-jiao.com
No. 215, Lianhe North Road, Fengxian District, Shanghai, China

