

SABIC VALOX™ PBT 745物性表

属性	典型值	UNITS	测试手段
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	48	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	46	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	89	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	3440	MPa	ASTM D790
Hardness, Rockwell R	112	-	ASTM D785
IMPACT			
Izod Impact, unnotched, 23°C	1602	J/m	ASTM D4812
Izod Impact, notched, 23°C	80	J/m	ASTM D256
THERMAL			
HDT, 0.45 MPa, 6.4 mm, unannealed	160	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	87	°C	ASTM D648
CTE, -40°C to 40°C, flow	7.56E-05	1/°C	ASTM E831
CTE, 60°C to 138°C, flow	1.39E-04	1/°C	ASTM E831
Relative Temp Index, Elec	105	°C	UL 746B
Relative Temp Index, Mech w/impact	105	°C	UL 746B
Relative Temp Index, Mech w/o impact	105	°C	UL 746B
PHYSICAL			
Specific Gravity	1.46	-	ASTM D792
Specific Volume	0.69	cm ³ /g	ASTM D792
Water Absorption, (23°C/24hrs)	0.09	%	ASTM D570
Mold Shrinkage, flow, 3.2 mm	0.8-1	%	SABIC method
Mold Shrinkage, flow, 1.5-3.2 mm	0.6-0.8	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.8-1	%	SABIC method
Mold Shrinkage, xflow, 1.5-3.2 mm	0.6-0.8	%	SABIC method

ELECTRICAL			
Volume Resistivity	6.9E+16	Ω.cm	ASTM D257
Dielectric Strength, in air, 3.2 mm	23.2	kV/mm	ASTM D149
Dielectric Strength, in oil, 1.6 mm	24.8	kV/mm	ASTM D149
Relative Permittivity, 100 Hz	3.3	-	ASTM D150
Relative Permittivity, 1 MHz	3.2	-	ASTM D150
Dissipation Factor, 100 Hz	0.002	-	ASTM D150
Dissipation Factor, 1 MHz	0.014	-	ASTM D150
Arc Resistance, Tungsten {PLC}	5	PLC Code	ASTM D495
Hot Wire Ignition {PLC}	2	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	3	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Yellow Card Link	E45587-236820	-	-
UL Recognized, 94HB Flame Class Rating	1.47	mm	UL 94
Injection Molding			
Drying Temperature	120	°C	
Drying Time	3-4	Hrs	
Drying Time (Cumulative)	12	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	255-275	°C	
Nozzle Temperature	255-270	°C	
Front - Zone 3 Temperature	255-265	°C	
Middle - Zone 2 Temperature	250-260	°C	
Rear - Zone 1 Temperature	245-255	°C	
Mold Temperature	65-95	°C	
Back Pressure	0.3-0.7	MPa	
Screw Speed	50-80	rpm	
Shot to Cylinder Size	40-80	%	
Vent Depth	0.025-0.038	mm	

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