

# SABIC VALOX™ PBT 325物性表

属性	典型值	UNITS	测试手段
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 50 mm/min	51	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	35	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	3	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	250	%	ASTM D638
Tensile Modulus, 50 mm/min	2400	MPa	ASTM D638
Taber Abrasion, CS-17, 1 kg	9	mg/1000cy	SABIC method
Tensile Stress, yield, 50 mm/min	55	MPa	ISO 527
Tensile Stress, break, 50 mm/min	55	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	3	%	ISO 527
Tensile Strain, break, 50 mm/min	100	%	ISO 527
Tensile Modulus, 1 mm/min	2400	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	80	MPa	ISO 178
Flexural Modulus, 2 mm/min	2100	MPa	ISO 178
Ball Indentation Hardness, H358/30	135	MPa	ISO 2039-1
Hardness, Rockwell R	118	-	ISO 2039-2
<b>IMPACT</b>			
Charpy Impact, unnotched, 23°C	NB	kJ/m <sup>2</sup>	ISO 179/2C
Charpy Impact, unnotched, -30°C	NB	kJ/m <sup>2</sup>	ISO 179/2C
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
Izod Impact, unnotched, -30°C	1240	J/m	ASTM D4812
Izod Impact, notched, 23°C	53	J/m	ASTM D256
Izod Impact, notched, 0°C	50	J/m	ASTM D256
Izod Impact, notched, -30°C	50	J/m	ASTM D256
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	NB	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	6	kJ/m <sup>2</sup>	ISO 180/1A

Izod Impact, notched 80*10*4 0°C	6		kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 - 30°C	6		kJ/m <sup>2</sup>	ISO 180/1A
Charpy Impact, notched, 23°C	6		kJ/m <sup>2</sup>	ISO 179/2C
Charpy Impact, notched, -30°C	5		kJ/m <sup>2</sup>	ISO 179/2C
<b>THERMAL</b>				
Vicat Softening Temp, Rate A/50	220		°C	ASTM D1525
Vicat Softening Temp, Rate B/50	175		°C	ASTM D1525
Thermal Conductivity	0.16		W/m-°C	ISO 8302
CTE, 23°C to 80°C, flow	1.3E-04		1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	1.3E-04		1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES		-	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	220		°C	ISO 306
Vicat Softening Temp, Rate B/50	175		°C	ISO 306
Vicat Softening Temp, Rate B/120	175		°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	115		°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	50		°C	ISO 75/Af
Relative Temp Index, Elec	120		°C	UL 746B
Relative Temp Index, Mech w/impact	120		°C	UL 746B
Relative Temp Index, Mech w/o impact	140		°C	UL 746B
<b>PHYSICAL</b>				
Specific Gravity	1.31		-	ASTM D792
Mold Shrinkage on Tensile Bar, flow	1.1-2		%	SABIC method
Mold Shrinkage on Tensile Bar, xflow	0.9-1.8		%	SABIC method
Melt Flow Rate, 265°C/5.0 kgf	50		g/10 min	ASTM D1238
Melt Flow Rate, 266°C/5.0 kgf	50		g/10 min	ASTM D1238
Density	1.31		g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/saturated)	0.34		%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.08		%	ISO 62
Melt Volume Rate, MVR at 250°C/2.16 kg	14		cm <sup>3</sup> /10 min	ISO 1133

Melt Volume Rate, MVR at 250°C/5.0 kg	30	cm <sup>3</sup> /10 min	ISO 1133
Melt Volume Rate, MVR at 265°C/5.0 kg	48	cm <sup>3</sup> /10 min	ISO 1133
Melt Viscosity, 260°C, 1500 sec-1	215	Pa-s	ISO 11443

## ELECTRICAL

Volume Resistivity	>1.E+15	Ω.cm	ASTM D257
Dielectric Strength, in oil, 0.8 mm	31	kV/mm	ASTM D149
Dielectric Strength, in oil, 1.6 mm	25	kV/mm	ASTM D149
Dielectric Strength, in oil, 3.2 mm	15.7	kV/mm	ASTM D149
Relative Permittivity, 1 MHz	3.1	-	ASTM D150
Dissipation Factor, 1 MHz	0.02	-	ASTM D150
Volume Resistivity	>1.E+15	Ω.cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ω	IEC 60093
Dielectric Strength, shorttime, 1.0mm	16	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 0.8 mm	31	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 1.6 mm	25	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	16	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	3.1	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.0003	-	IEC 60250
Dissipation Factor, 1 MHz	0.02	-	IEC 60250
Comparative Tracking Index	600	V	IEC 60112
Comparative Tracking Index, M	350	V	IEC 60112
Relative Permittivity, 50/60 Hz	2.9	-	IEC 60250

## FLAME CHARACTERISTICS

UL Yellow Card Link	E45329-236588	-	-
UL Recognized, 94HB Flame Class Rating	1.5	mm	UL 94
UL Recognized, 94HB Flame Class Rating 2nd value	3	mm	UL 94
Glow Wire Flammability Index 750°C, passes at	3.2	mm	IEC 60695-2-12
Glow Wire Flammability Index 850°C, passes at	1	mm	IEC 60695-2-12
Oxygen Index (LOI)	21	%	ISO 4589

## Injection Molding

Drying Temperature	110-120	°C
Drying Time	2-4	Hrs
Maximum Moisture Content	0.02	%
Melt Temperature	250-270	°C
Nozzle Temperature	240-260	°C
Front - Zone 3 Temperature	245-265	°C
Middle - Zone 2 Temperature	240-255	°C
Rear - Zone 1 Temperature	230-245	°C
Hopper Temperature	40-60	°C
Mold Temperature	40-100	°C

此数据由我们从该材料的生产商处获得。我们尽最大努力确保此数据的准确性，但是我们对这些数据值不承担任何责任，并强烈建议在最终选料前，就数据值与材料供应商进行验证。