

SABIC VALOX™ PBT VX4930物性表

属性	典型值	UNITS	测试手段
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	125	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	125	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	2.8	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.8	%	ASTM D638
Tensile Modulus, 5 mm/min	9500	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	175	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	7700	MPa	ASTM D790
Taber Abrasion, CS-17, 1 kg	65	mg/1000cy	SABIC method
Tensile Stress, yield, 5 mm/min	130	MPa	ISO 527
Tensile Stress, break, 5 mm/min	130	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.8	%	ISO 527
Tensile Strain, break, 5 mm/min	2.8	%	ISO 527
Tensile Modulus, 1 mm/min	9600	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	185	MPa	ISO 178
Flexural Stress, break, 2 mm/min	180	MPa	ISO 178
Flexural Strain, break, 2 mm/min	2.9	%	ISO 178
Flexural Modulus, 2 mm/min	8200	MPa	ISO 178
Ball Indentation Hardness, H358/30	210	MPa	ISO 2039-1
Hardness, Rockwell R	116	-	ISO 2039-2
IMPACT			
Charpy Impact, unnotched, 23°C	55	kJ/m ²	ISO 179/2C
Charpy Impact, unnotched, -30°C	45	kJ/m ²	ISO 179/2C
Izod Impact, unnotched, 23°C	800	J/m	ASTM D4812
Izod Impact, unnotched, -30°C	800	J/m	ASTM D4812
Izod Impact, notched, 23°C	80	J/m	ASTM D256
Izod Impact, notched, 0°C	80	J/m	ASTM D256

Izod Impact, notched, -30°C	80	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	78	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	50	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	45	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	9	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 0°C	8	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	8	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	7	kJ/m ²	ISO 179/1eA
Charpy Impact, notched, 23°C	9	kJ/m ²	ISO 179/2C
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	6	kJ/m ²	ISO 179/1eA
Charpy Impact, notched, -30°C	9	kJ/m ²	ISO 179/2C
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	30	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	25	kJ/m ²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate A/50	218	°C	ASTM D1525
Vicat Softening Temp, Rate B/50	182	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	190	°C	ASTM D648
CTE, -40°C to 40°C, flow	2.2E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	1.15E-04	1/°C	ASTM E831
Thermal Conductivity	0.26	W/m-°C	ISO 8302
CTE, 23°C to 60°C, flow	2.2E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	1.15E-04	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	218	°C	ISO 306
Vicat Softening Temp, Rate B/50	182	°C	ISO 306
Vicat Softening Temp, Rate B/120	182	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	215	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	190	°C	ISO 75/Ae

Relative Temp Index, Elec	50	°C	UL 746B
Relative Temp Index, Mech w/impact	50	°C	UL 746B
Relative Temp Index, Mech w/o impact	50	°C	UL 746B

PHYSICAL

Specific Gravity	1.46	-	ASTM D792
Filler Content	30	%	ASTM D229
Mold Shrinkage on Tensile Bar, flow	0.1-0.3	%	SABIC method
Mold Shrinkage, flow, 3.2 mm	0.3-0.7	%	SABIC method
Mold Shrinkage on Tensile Bar, xflow	0.3-0.7	%	SABIC method
Melt Flow Rate, 200°C/3.8 kgf	13	g/10 min	ASTM D1238
Melt Flow Rate, 265°C/5.0 kgf	35	g/10 min	ASTM D1238
Melt Flow Rate, 266°C/5.0 kgf	35	g/10 min	ASTM D1238
Density	1.46	g/cm ³	ISO 1183
Water Absorption, (23°C/saturated)	0.71	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.23	%	ISO 62
Melt Volume Rate, MVR at 250°C/5.0 kg	13	cm ³ /10 min	ISO 1133
Melt Volume Rate, MVR at 265°C/5.0 kg	25	cm ³ /10 min	ISO 1133
Melt Viscosity, 260°C, 1500 sec-1	130	Pa-s	ISO 11443

ELECTRICAL

Comparative Tracking Index (UL) {PLC}	1	PLC Code	UL 746A
Volume Resistivity	>1.E+15	Ω.cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ω	IEC 60093
Dielectric Strength, in oil, 3.2 mm	21	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	3.2	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.0024	-	IEC 60250
Dissipation Factor, 1 MHz	0.0182	-	IEC 60250
Comparative Tracking Index	500	V	IEC 60112
Relative Permittivity, 50/60 Hz	3.6	-	IEC 60250

FLAME CHARACTERISTICS

UL Recognized, 94HB Flame Class Rating	0.75	mm	UL 94
UL Recognized, 94HB Flame Class Rating 2nd value	3	mm	UL 94
Glow Wire Flammability Index 750°C, passes at	1	mm	IEC 60695-2-12

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。