

SABIC XENOY™ PBT/PC XL1339物性表

属性	典型值	UNITS	测试手段
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	49	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	49	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	110	%	ASTM D638
Tensile Modulus, 50 mm/min	2090	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	94	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2090	MPa	ASTM D790
Taber Abrasion, CS-17, 1 kg	16	mg/1000cy	ASTM D1044
Tensile Stress, yield, 50 mm/min	55	MPa	ISO 527
Tensile Stress, break, 50 mm/min	40	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5	%	ISO 527
Tensile Strain, break, 50 mm/min	70	%	ISO 527
Flexural Stress, yield, 2 mm/min	80	MPa	ISO 178
Flexural Modulus, 2 mm/min	2200	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	699	J/m	ASTM D256
Izod Impact, notched, 0°C	672	J/m	ASTM D256
Izod Impact, notched, -20°C	598	J/m	ASTM D256
Izod Impact, notched, -30°C	245	J/m	ASTM D256
Izod Impact, notched, -40°C	224	J/m	ASTM D256
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	40	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -10°C	38	kJ/m ²	ISO 180/1A

Izod Impact, notched 80*10*4 - 20°C	35	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 - 30°C	25	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 - 40°C	15	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	45	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	35	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m ²	ISO 179/1eU
THERMAL			
CTE, -30°C to 30°C, flow	7.56E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	7.92E-05	1/°C	ASTM D696
Thermal Conductivity	0.18	W/m-°C	ASTM C177
Vicat Softening Temp, Rate A/50	140	°C	ISO 306
Vicat Softening Temp, Rate B/50	130	°C	ISO 306
Vicat Softening Temp, Rate B/120	135	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	125	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	105	°C	ISO 75/Ae
PHYSICAL			
Specific Gravity	1.22	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.1	%	ASTM D570
Water Absorption, (23°C/Saturated)	0.7	%	ASTM D570
Moisture Absorption, (50% RH, Equilibrium)	0.2	%	ASTM D570
Mold Shrinkage on Tensile Bar, flow	0.5-0.8	%	SABIC method
Mold Shrinkage on Tensile Bar, xflow	0.5-0.8	%	SABIC method
Poisson's Ratio	0.4	-	ASTM E132
Melt Volume Rate, MVR at 265°C/1.2 kg	4	cm ³ /10 min	ISO 1133
ELECTRICAL			

Volume Resistivity	>1.E+14	Ω.cm	ASTM D257
Surface Resistivity	>1.E+15	Ω	ASTM D257
Dielectric Strength, in oil, 3.2 mm	16.9	kV/mm	ASTM D149
Relative Permittivity, 50/60 Hz	3.3	-	ASTM D150
Relative Permittivity, 1 MHz	3.1	-	ASTM D150
Dissipation Factor, 50/60 Hz	0.002	-	ASTM D150
Dissipation Factor, 1 MHz	0.02	-	ASTM D150

Injection Molding

Drying Temperature	110	°C
Drying Time	4-6	Hrs
Drying Time (Cumulative)	8	Hrs
Maximum Moisture Content	0.02	%
Melt Temperature	260-275	°C
Nozzle Temperature	255-270	°C
Front - Zone 3 Temperature	255-275	°C
Middle - Zone 2 Temperature	250-270	°C
Rear - Zone 1 Temperature	245-265	°C
Mold Temperature	65-90	°C
Back Pressure	0.3-0.7	MPa
Screw Speed	50-80	rpm
Shot to Cylinder Size	50-80	%
Vent Depth	0.013-0.02	mm

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