

SABIC VALOX™ PBT EH7020HF物性表

属性	典型值	UNITS	测试手段
MECHANICAL			
Tensile Stress, yield	56	MPa	SABIC - Japan Method
Tensile Stress, yld, Type I, 5 mm/min	55	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	56	MPa	ASTM D638
Tensile Strain, break	8	%	SABIC - Japan Method
Tensile Strain, yld, Type I, 5 mm/min	2	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2	%	ASTM D638
Tensile Modulus, 5 mm/min	5880	MPa	ASTM D638
Flexural Stress, yield, 6.4 mm	96	MPa	ASTM D790
Flexural Stress, yld, 1.3 mm/min, 50 mm span	93	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	4680	MPa	ASTM D790
Flexural Modulus, 6.4 mm	4860	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	45	MPa	ISO 527
Tensile Stress, break, 5 mm/min	57	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	1.5	%	ISO 527
Tensile Strain, break, 5 mm/min	1.9	%	ISO 527
Tensile Modulus, 1 mm/min	4800	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	96	MPa	ISO 178
Flexural Modulus, 2 mm/min	4710	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	30	J/m	ASTM D256
Izod Impact, notched, -30°C	31	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	4	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C	2	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	2	kJ/m ²	ISO 180/1A

Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	2	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	180	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	70	°C	ASTM D648
HDT, 0.45 MPa, 6.4 mm, unannealed	200	°C	ASTM D648
CTE, -40°C to 40°C, flow	5.29E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.2E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	5.29E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.2E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	75	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	180	°C	ISO 306
Vicat Softening Temp, Rate B/120	179	°C	ISO 306
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	77	°C	ISO 75/Ae
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	89	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.49	-	ASTM D792
Mold Shrinkage on Tensile Bar, flow	1.53-1.57	%	SABIC method
Mold Shrinkage, flow, 3.2 mm	1.037-1.059	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	1.147-1.18	%	SABIC method
Melt Flow Rate, 265°C/2.16kgf	64	g/10 min	ASTM D1238
Melt Flow Rate, 266°C/1.2 kgf	36	g/10 min	ASTM D1238
Density	1.49	g/cm ³	ISO 1183
Water Absorption, (23°C/saturated)	0.42	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.42	%	ISO 62
Melt Volume Rate, MVR at 265°C/2.16 kg	52	cm ³ /10 min	ISO 1133
Injection Molding			
Drying Temperature	120	°C	
Drying Time	3-4	Hrs	
Drying Time (Cumulative)	12	Hrs	
Maximum Moisture Content	0.02	%	

Melt Temperature	250-265	°C
Nozzle Temperature	245-260	°C
Front - Zone 3 Temperature	250-265	°C
Middle - Zone 2 Temperature	245-260	°C
Rear - Zone 1 Temperature	240-255	°C
Mold Temperature	65-90	°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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