

SABIC LEXAN™ PC AD143物性表

属性	典型值	UNITS	测试手段
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	62	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	69	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	7	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	130	%	ASTM D638
Tensile Modulus, 5 mm/min	2300	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	97	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2340	MPa	ASTM D790
Taber Abrasion, CS-17, 1 kg	10	mg/1000cy	SABIC method
Tensile Stress, yield, 50 mm/min	63	MPa	ISO 527
Tensile Stress, break, 50 mm/min	70	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	120	%	ISO 527
Tensile Modulus, 1 mm/min	2350	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2300	MPa	ISO 178
Ball Indentation Hardness, H358/30	95	MPa	ISO 2039-1
IMPACT			
Izod Impact, notched, 23°C	801	J/m	ASTM D256
Izod Impact, notched, -30°C	125	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	64	J	ASTM D3763
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	70	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	12	kJ/m ²	ISO 180/1A

Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	73	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	14	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m ²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate B/50	153	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	114	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	130	°C	ASTM D648
CTE, -40°C to 40°C, flow	7.E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ASTM E831
Thermal Conductivity	0.2	W/m-°C	ISO 8302
CTE, 23°C to 80°C, flow	7.E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	Pass	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	140	°C	ISO 306
Vicat Softening Temp, Rate B/120	141	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	135	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	123	°C	ISO 75/Ae
PHYSICAL			
Specific Gravity	1.2	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.5-0.7	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.5-0.7	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	13	g/10 min	ASTM D1238
Density	1.2	g/cm ³	ISO 1183
Water Absorption, (23°C/saturated)	0.35	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.15	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	12	cm ³ /10 min	ISO 1133
OPTICAL			
Light Transmission, 2.54 mm	89	%	ASTM D1003

Haze, 2.54 mm	<0.8	%	ASTM D1003
Refractive Index	1.586	-	ISO 489
ELECTRICAL			
Surface Resistivity	5.E+13	Ω	ASTM D257
FLAME CHARACTERISTICS			
Glow Wire Flammability Index 850°C, passes at	1.6	mm	IEC 60695-2-12
Injection Molding			
Drying Temperature	120	°C	
Drying Time	2-4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	280-310	°C	
Nozzle Temperature	270-290	°C	
Front - Zone 3 Temperature	280-310	°C	
Middle - Zone 2 Temperature	270-290	°C	
Rear - Zone 1 Temperature	260-280	°C	
Hopper Temperature	60-80	°C	
Mold Temperature	80-110	°C	

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