

# SABIC CYCOLAC™ ABS EX58物性表

属性	典型值	UNITS	测试手段
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 5 mm/min	39	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	30	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	3.1	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	32	%	ASTM D638
Tensile Modulus, 5 mm/min	2080	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	66	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2160	MPa	ASTM D790
Hardness, Rockwell R	102	-	ASTM D785
Tensile Stress, yield, 50 mm/min	41	MPa	ISO 527
Tensile Stress, break, 50 mm/min	30	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	2.6	%	ISO 527
Tensile Strain, break, 50 mm/min	21	%	ISO 527
Tensile Modulus, 1 mm/min	1970	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	60	MPa	ISO 178
Flexural Modulus, 2 mm/min	2000	MPa	ISO 178
<b>IMPACT</b>			
Izod Impact, notched, 23°C	432	J/m	ASTM D256
Izod Impact, notched, -30°C	299	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	37	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C	35	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	23	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	37	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	106	°C	ASTM D1525

HDT, 0.45 MPa, 3.2 mm, unannealed	91	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	76	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.01E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	1.04E-04	1/°C	ASTM E831
Vicat Softening Temp, Rate B/50	95	°C	ISO 306
Vicat Softening Temp, Rate B/120	97	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	78	°C	ISO 75/Af
Relative Temp Index, Elec	60	°C	UL 746B
Relative Temp Index, Mech w/impact	60	°C	UL 746B
Relative Temp Index, Mech w/o impact	60	°C	UL 746B
<b>PHYSICAL</b>			
Specific Gravity	1.03	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.6-0.8	%	SABIC method
Melt Viscosity, 240°C, 100 sec-1	15500	Poise	ASTM D3825
Density	1.03	g/cm <sup>3</sup>	ISO 1183
Melt Flow Rate, 220°C/10.0 kg	4	g/10 min	ISO 1133
<b>ELECTRICAL</b>			
Arc Resistance, Tungsten {PLC}	5	PLC Code	ASTM D495
Hot Wire Ignition {PLC}	4	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	1	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	4	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
<b>FLAME CHARACTERISTICS</b>			
UL Recognized, 94HB Flame Class Rating	1.5	mm	UL 94
<b>Extrusion Blow Molding</b>			
Drying Temperature	80-90	°C	
Drying Time	4-5	Hrs	
Drying Time (Cumulative)	24	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature (Parison)	215-230	°C	

Barrel - Zone 1 Temperature	205-225	°C
Barrel - Zone 2 Temperature	205-225	°C
Barrel - Zone 3 Temperature	205-225	°C
Barrel - Zone 4 Temperature	205-225	°C
Adapter - Zone 5 Temperature	210-230	°C
Head - Zone 6 - Top Temperature	215-230	°C
Head - Zone 7 - Bottom Temperature	215-230	°C
Screw Speed	20-60	rpm
Extruder Feed Zone Temperature	60-75	°C
Mold Temperature	40-80	°C
Die Temperature	215-235	°C
<b>Sheet Extrusion</b>		
Drying Temperature	80-95	°C
Drying Time	4	Hrs
Maximum Moisture Content	0.02	%
Melt Temperature	215-260	°C
Barrel - Zone 1 Temperature	170-200	°C
Barrel - Zone 2 Temperature	180-220	°C
Barrel - Zone 3 Temperature	190-225	°C
Barrel - Zone 4 Temperature	200-240	°C
Adapter Temperature	205-250	°C
Die Temperature	205-250	°C
Roll Stack Temp - Top	90-95	°C
Roll Stack Temp - Middle	95-105	°C
Roll Stack Temp - Bottom	100-105	°C

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