

SABIC CYCOLAC™ ABS MG47物性表

属性	典型值	UNITS	测试手段
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	44	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	33	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	2	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	24	%	ASTM D638
Tensile Modulus, 5 mm/min	2270	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	70	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2300	MPa	ASTM D790
Hardness, Rockwell R	112	-	ASTM D785
Tensile Stress, yield, 50 mm/min	47	MPa	ISO 527
Tensile Stress, break, 50 mm/min	35	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	2.6	%	ISO 527
Tensile Strain, break, 50 mm/min	25	%	ISO 527
Tensile Modulus, 1 mm/min	2370	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	70	MPa	ISO 178
Flexural Modulus, 2 mm/min	2200	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	320	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	30	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C	22	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	26	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	9	kJ/m ²	ISO 179/1eA
THERMAL			

Vicat Softening Temp, Rate B/50	99	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	94	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	80	°C	ASTM D648
CTE, -40°C to 40°C, flow	8.82E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	8.82E-05	1/°C	ASTM E831
Vicat Softening Temp, Rate B/50	98	°C	ISO 306
Vicat Softening Temp, Rate B/120	100	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	81	°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
PHYSICAL			
Specific Gravity	1.04	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.5-0.8	%	SABIC method
Melt Flow Rate, 230°C/3.8 kg	5.6	g/10 min	ASTM D1238
Melt Viscosity, 240°C, 1000 sec-1	2250	Poise	ASTM D3825
Density	1.04	g/cm ³	ISO 1183
Melt Flow Rate, 220°C/10.0 kg	18	g/10 min	ISO 1133
ELECTRICAL			
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D495
Hot Wire Ignition {PLC}	3	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	3	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating	1.5	mm	UL 94
Injection Molding			
Drying Temperature	80-95	°C	
Drying Time	2-4	Hrs	
Drying Time (Cumulative)	8	Hrs	

Maximum Moisture Content	0.1	%
Melt Temperature	220-260	°C
Nozzle Temperature	220-260	°C
Front - Zone 3 Temperature	215-240	°C
Middle - Zone 2 Temperature	205-225	°C
Rear - Zone 1 Temperature	190-210	°C
Mold Temperature	50-70	°C
Back Pressure	0.3-0.7	MPa
Screw Speed	30-60	rpm
Shot to Cylinder Size	50-70	%
Vent Depth	0.038-0.051	mm

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