

SABIC CYCOLAC™ ABS FR15U物性表

属性	典型值	UNITS	测试手段
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	37	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	30	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	2.4	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	17	%	ASTM D638
Tensile Modulus, 5 mm/min	2060	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	67	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2340	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	41	MPa	ISO 527
Tensile Strain, break, 50 mm/min	22.0	%	ISO 527
Tensile Modulus, 1 mm/min	2210	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	63	MPa	ISO 178
Flexural Modulus, 2 mm/min	2260	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	213	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	28	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C	12	kJ/m ²	ISO 180/1A
THERMAL			
Vicat Softening Temp, Rate B/50	93	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	86	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	75	°C	ASTM D648
CTE, -40°C to 40°C, flow	9.E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	9.18E-05	1/°C	ASTM E831
Vicat Softening Temp, Rate B/50	92	°C	ISO 306
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	1.19	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.5-0.7	%	SABIC method
Melt Flow Rate, 230°C/3.8 kg	3.3	g/10 min	ASTM D1238
Melt Viscosity, 200°C, 1000 sec-1	3200	Poise	ASTM D3825
Density	1.19	g/cm ³	ISO 1183
Melt Flow Rate, 220°C/5.0 kg	7	g/10 min	ISO 1133
Melt Volume Rate, MVR at 220°C/10.0 kg	40	cm ³ /10 min	ISO 1133
ELECTRICAL			
Arc Resistance, Tungsten {PLC}	7	PLC Code	ASTM D495
Hot Wire Ignition {PLC}	2	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	4	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	1	PLC Code	UL 746A
Volume Resistivity	>1.E+14	Ω.cm	IEC 60093
Dielectric Strength, in oil, 3.2 mm	20	kV/mm	IEC 60243-1
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating	1.49	mm	UL 94
UL Recognized, 94-5VA Flame Class Rating	2.79	mm	UL 94
Injection Molding			
Drying Temperature	80-90	°C	
Drying Time	2-4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.1	%	
Melt Temperature	205-230	°C	
Nozzle Temperature	205-230	°C	
Front - Zone 3 Temperature	205-220	°C	
Middle - Zone 2 Temperature	200-210	°C	

Rear - Zone 1 Temperature	170-180	°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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