

# SABIC CYCOLOY™ PC/ABS XCM830物性表

属性	典型值	UNITS	测试手段
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 5 mm/min	60	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	55	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	5	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	100	%	ASTM D638
Tensile Modulus, 5 mm/min	3400	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	95	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	3100	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	56	MPa	ISO 527
Tensile Stress, break, 5 mm/min	55	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	5	%	ISO 527
Tensile Strain, break, 5 mm/min	100	%	ISO 527
Tensile Modulus, 1 mm/min	3100	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	95	MPa	ISO 178
Flexural Modulus, 2 mm/min	3100	MPa	ISO 178
<b>IMPACT</b>			
Izod Impact, notched, 23°C	500	J/m	ASTM D256
Izod Impact, notched, -30°C	120	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	65	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	NB	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	40	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	10	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	45	kJ/m <sup>2</sup>	ISO 179/1eA

Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	10	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m <sup>2</sup>	ISO 179/1eU

## THERMAL

Vicat Softening Temp, Rate B/50	138	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	118	°C	ASTM D648
CTE, -40°C to 40°C, flow	6.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, -40°C to 40°C, flow	6.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	138	°C	ISO 306
Vicat Softening Temp, Rate B/120	140	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	118	°C	ISO 75/Af

## PHYSICAL

Specific Gravity	1.22	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.7-0.8	%	SABIC method
Melt Flow Rate, 260°C/5.0 kgf	11	g/10 min	ASTM D1238
Density	1.22	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/saturated)	0.4	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.1	%	ISO 62
Melt Volume Rate, MVR at 260°C/5.0 kg	9	cm <sup>3</sup> /10 min	ISO 1133

## Injection Molding

Drying Temperature	120-110	°C	
Drying Time	2-6	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	270-300	°C	
Nozzle Temperature	260-290	°C	
Front - Zone 3 Temperature	270-300	°C	

Middle - Zone 2 Temperature	265-290	°C
Rear - Zone 1 Temperature	260-270	°C
Mold Temperature	60-100	°C
Back Pressure	0.3-0.7	MPa
Screw Speed	40-70	rpm
Shot to Cylinder Size	30-80	%
Vent Depth	0.038-0.076	mm

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