CYCOLOY™ RESIN XCM840

REGION AMERICAS

DESCRIPTION

High stiffness PC/ABS blend offering practical impact, low CTE, high heat resistance, with good aesthetics suitable for injection molding

TYPICAL PROPERTY VALUES

Revision 20190411

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	56	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	47	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	4	%	ASTM D 638
Tensile Modulus, 5 mm/min	4300	MPa	ASTM D 638
Tensile Stress, yield, 5 mm/min	56	MPa	ISO 527
Tensile Stress, break, 5 mm/min	47	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	4	%	ISO 527
Tensile Strain, break, 5 mm/min	50	%	ISO 527
Tensile Modulus, 1 mm/min	4300	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	100	MPa	ISO 178
Flexural Modulus, 2 mm/min	4000	MPa	ISO 178
IMPACT			
Instrumented Impact Total Energy, 23°C	60	J	ASTM D 3763
Izod Impact, notched 80*10*3 +23°C	15	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	8	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	37	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	10	kJ/m²	ISO 179/1eA
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	120	°C	ASTM D 648
CTE, -40°C to 40°C, flow	4.6E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.1E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	4.6E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.1E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	138	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	120	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.27	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.5 – 0.7	%	SABIC method
Density	1.27	g/cm³	ISO 1183
Melt Volume Rate, MVR at 260°C/5.0 kg	10	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 265°C/5.0 kg	12	cm³/10 min	ISO 1133
INJECTION MOLDING			
Drying Temperature	120 – 125	°C	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Drying Time	4 – 6	hrs	
Maximum Moisture Content	0.01	%	
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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