

# CYCOLOY™ NON-FR 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 20180906

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
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
<b>IMPACT</b>			
Instrumented Impact Total Energy, 23°C	60	J	ASTM D 3763
Izod Impact, notched 80*10*3 +23°C	15	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	8	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	37	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	10	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL</b>			
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
<b>PHYSICAL</b>			
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/cm <sup>3</sup>	ISO 1183
Melt Volume Rate, MVR at 260°C/5.0 kg	10	cm <sup>3</sup> /10 min	ISO 1133
Melt Volume Rate, MVR at 265°C/5.0 kg	12	cm <sup>3</sup> /10 min	ISO 1133
<b>INJECTION MOLDING</b>			
Drying Temperature	120 – 125	°C	
Drying Time	4 – 6	hrs	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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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