

## Cycloloy\* Resin XCM830

Americas: COMMERCIAL

PC/ABS with high stiffness and impact performance

### Property

TYPICAL PROPERTIES <sup>(1)</sup>			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 5 mm/min	60	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	55	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	5	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	110	%	ASTM D 638
Tensile Modulus, 5 mm/min	3100	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	95	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	3000	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	60	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	110	%	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	3000	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	500	J/m	ASTM D 256
Izod Impact, notched, -30°C	120	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	65	J	ASTM D 3763
Izod Impact, notched 80*10*3 +23°C	45	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	10	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	45	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
THERMAL	Value	Unit	Standard
Vicat Softening Temp, Rate B/50	138	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	120	°C	ASTM D 648
CTE, -40°C to 40°C, flow	6.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ASTM E 831
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	120	°C	ISO 75/Af
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.22	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 260°C/5.0 kgf	11	g/10 min	ASTM D 1238
Density	1.22	g/cm <sup>3</sup>	ISO 1183

Water Absorption, (23°C/sat)	0.4	%	ISO 62
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

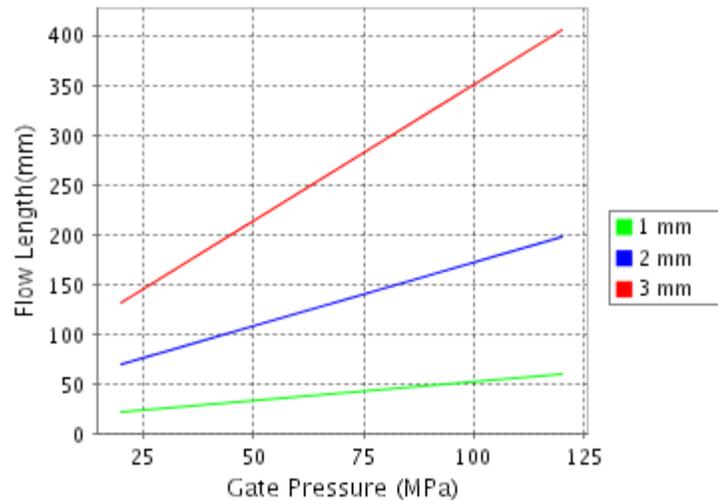
Source GMD, last updated:02/06/2006

## Processing

Parameter	Value	Unit
<b>Injection Molding</b>		
Drying Temperature	100 - 110	°C
Drying Time	3 - 4	hrs
Maximum Moisture Content	0.04	%
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

Source GMD, last updated:02/06/2006

**CALCULATED FLOW LENGTH INDICATION**  
**Moldflow® Radial Flow Analysis**  
**Cycloxy® XCM830**  
**Melt Temperature : 285°C**  
**Mold Temperature : 80°C**



**Note: Technical support is recommended if Gate Pressure is greater than 50 MPa. Contact your local representative.**  
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PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

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