

## Cycloloy\* Resin CX7240

Americas: COMMERCIAL

Cycloloy\* CX7240 resin is an injection moldable PC/ABS blend. It contains non-brominated and non-chlorinated flame retardant systems to meet UL-94 V0 at 0.75mm, V1 at 0.6mm, V2 at 0.2mm and 5VB at 1.5mm respectively. Excellent flow and impact balance together with the thin wall flame resistance and all color options make Cycloloy CX7240 an ideal candidate for a wide variety of thin wall applications.

### Property

TYPICAL PROPERTIES <sup>(1)</sup>			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 50 mm/min	65	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	58	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	4.1	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	100	%	ASTM D 638
Tensile Modulus, 5 mm/min	2600	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	104	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2500	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	65	MPa	ISO 527
Tensile Stress, break, 50 mm/min	50	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	90	%	ISO 527
Tensile Modulus, 1 mm/min	2600	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	96	MPa	ISO 178
Flexural Modulus, 2 mm/min	2500	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	700	J/m	ASTM D 256
Izod Impact, notched, -30°C	175	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	65	J	ASTM D 3763
Izod Impact, notched 80*10*3 +23°C	20	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	20	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	110	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	100	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	89	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	99	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.5E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.5E-05	1/°C	ASTM E 831
Thermal Conductivity	0.2	W/m-°C	ISO 8302
CTE, -40°C to 40°C, flow	7.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.5E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	Pass	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	110	°C	ISO 306
Vicat Softening Temp, Rate B/120	113	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	93	°C	ISO 75/Af

Relative Temp Index, Elec	90	°C	UL 746B
Relative Temp Index, Mech w/impact	90	°C	UL 746B
Relative Temp Index, Mech w/o impact	90	°C	UL 746B
<b>PHYSICAL</b>	<b>Value</b>	<b>Unit</b>	<b>Standard</b>
Specific Gravity	1.19	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.4 - 0.6	%	SABIC Method
Melt Flow Rate, 260°C/2.16 kgf	18	g/10 min	ASTM D 1238
Density	1.2	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/sat)	0.2	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.1	%	ISO 62
Melt Volume Rate, MVR at 260°C/2.16 kg	15	cm <sup>3</sup> /10 min	ISO 1133
<b>ELECTRICAL</b>	<b>Value</b>	<b>Unit</b>	<b>Standard</b>
Hot Wire Ignition {PLC}	3	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
Volume Resistivity	>1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, in oil, 0.8 mm	35	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 1.6 mm	25	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	17	kV/mm	IEC 60243-1
<b>FLAME CHARACTERISTICS</b>	<b>Value</b>	<b>Unit</b>	<b>Standard</b>
UL Recognized, 94V-1 Flame Class Rating (3)	0.6	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating (3)	0.75	mm	UL 94
UL Recognized, 94-5VA Rating (3)	3	mm	UL 94
UL Recognized, 94-5VB Rating (3)	1.5	mm	UL 94
Glow Wire Flammability Index 960°C, passes at	0.75	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	825	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm	800	°C	IEC 60695-2-13

Source GMD, last updated:02/14/2005

## Processing

Parameter	Value	Unit
<b>Injection Molding</b>		
Drying Temperature	80 - 90	°C
Drying Time	2 - 4	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	250 - 300	°C
Nozzle Temperature	250 - 300	°C
Front - Zone 3 Temperature	250 - 300	°C
Middle - Zone 2 Temperature	240 - 290	°C
Rear - Zone 1 Temperature	230 - 280	°C
Hopper Temperature	60 - 80	°C
Mold Temperature	60 - 85	°C

Source GMD, last updated:02/14/2005

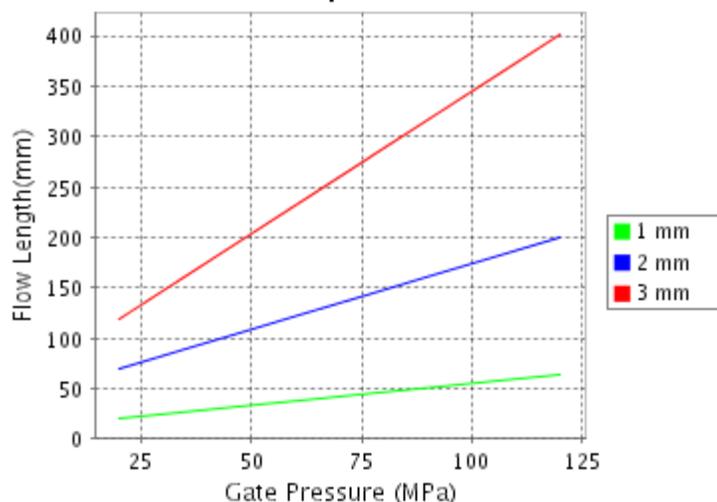
## CALCULATED FLOW LENGTH INDICATION

Moldflow® Radial Flow Analysis

Cycloy® C4210

Melt Temperature : 260°C

Mold Temperature : 65°C



**Note: Technical support is recommended if Gate Pressure is greater than 80 MPa. Contact your local representative.**

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THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

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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