



CYCOLOY™ Resin CX7240

Americas: COMMERCIAL

CYCOLOY 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 CYCOLOY CX7240 an ideal candidate for a wide variety of thin wall applications.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	660	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	590	kgf/cm ²	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	26500	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	1060	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	25400	kgf/cm ²	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			
Izod Impact, notched, 23°C	71	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	17	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	662	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*3 +23°C	20	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	10	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 +23°C	25	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	10	kJ/m ²	ISO 180/1A

(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.

(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:





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IMPACT			
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	20	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	10	kJ/m ²	ISO 179/1eA
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	22	kJ/m ²	ISO 179/1eA
THERMAL			
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
PHYSICAL			
Specific Gravity	1.19	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	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 ³	ISO 1183

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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
PHYSICAL			
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 ³ /10 min	ISO 1133
ELECTRICAL			
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
FLAME CHARACTERISTICS			
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 Flammability Index 960°C, passes at, by VDE	0.75	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 0.75 mm, by VDE	775	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.0 mm	825	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.5 mm, by VDE	775	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm	800	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm, by VDE	775	°C	IEC 60695-2-13
Oxygen Index (LOI)	34	%	ISO 4589

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
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
Vent Depth	0.03 - 0.075	mm

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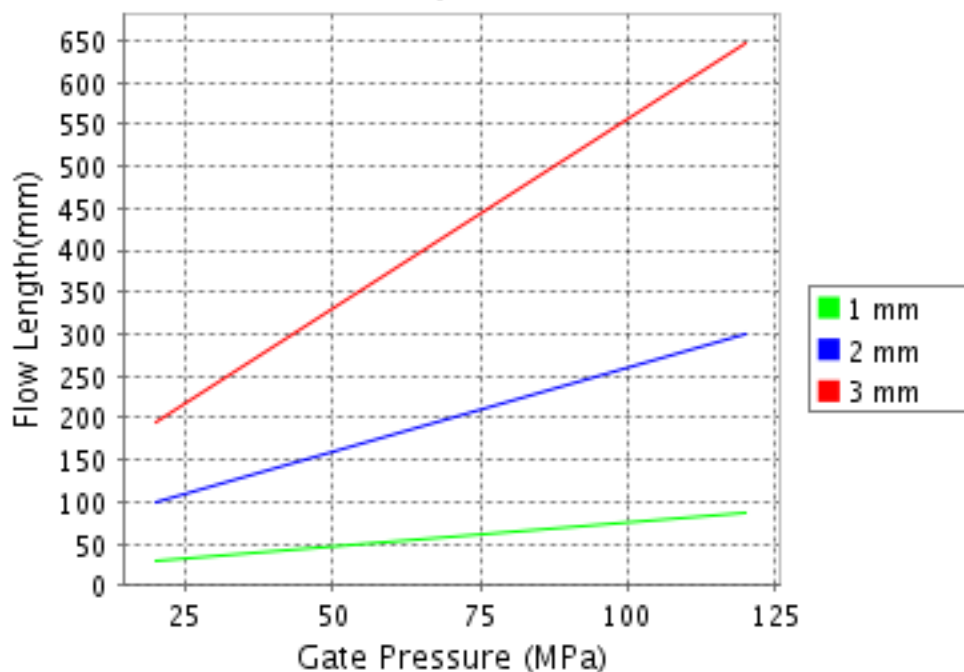
CALCULATED FLOW LENGTH INDICATION

Moldflow® Radial Flow Analysis

CYCOLOY® CX7240

Melt Temperature : 285°C

Mold Temperature : 75°C



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

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