CYCOLOY™ FR RESIN CX7240U

REGION ASIA

DESCRIPTION

CYCOLOY CX7240U Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) blend is an injection moldable, medium flow, non chlorinated/brominated UV stabilized flame retardant grade. It has a UL94 V0@.75mm, 5VA@3.0mm and 5VB@1.5mm flame rating. This grade has improved chemical resistance compared to standard PC/ABS blends and is a good candidate for thin wall applications.

TYPICAL PROPERTY VALUES

Revision 20191031

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
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, 50 mm/min	2950	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	2750	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	2530	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	500	J/m	ASTM D 256
Izod Impact, notched, -30°C	100	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/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	10	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	20	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	10	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	106	°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	6.25E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	5.35E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	6.2E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	5.4E-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

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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 [1]	90	°C	UL 746B
Relative Temp Index, Mech w/impact [1]	90	°C	UL 746B
Relative Temp Index, Mech w/o impact [1]	90	°C	UL 746B
PHYSICAL			
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	16	g/10 min	ASTM D 1238
Density	1.2	g/cm³	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	cm³/10 min	ISO 1133
ELECTRICAL			
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 3	0.75	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	0.75	mm	UL 746A
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E207780-642977	-	-
UL Recognized, 94-5VA Flame Class Rating	≥3	mm	UL 94
UL Recognized, 94-5VB Flame Class Rating	≥1.5	mm	UL 94
UL Recognized, 94V-2 Flame Class Rating	≥0.4	mm	UL 94
UL Recognized, 94V-1 Flame Class Rating	≥0.6	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	≥0.75	mm	UL 94
Glow Wire Ignitability Temperature, 3.0 mm	800	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 2.0 mm	800	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.5 mm	800	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 0.75 mm	800	°C	IEC 60695-2-13
Glow Wire Flammability Index, 3.0 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 2.0 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 1.5 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 0.75 mm	960	°C	IEC 60695-2-12
INJECTION MOLDING			
Drying Temperature	90	°C	
Drying Time	4	hrs	
Maximum Moisture Content	0.04	%	
Melt Temperature	270 – 300	°C	
Nozzle Temperature	265 – 300	°C	
Front - Zone 3 Temperature	265 – 300	°C	
Middle - Zone 2 Temperature	260 – 300	°C	
Rear - Zone 1 Temperature	260 – 300	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	60 – 90	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Shot to Cylinder Size	40 – 80	%	
Vent Depth	0.038 – 0.076	mm	

(1) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

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