



CYCOLOY™ Resin CX2142ME

Americas: COMMERCIAL

Cycloloy* resin grade CX2142ME is an injection moldable PC/ABS blend with Br- and Cl-free flame retardant systems. Key features of good flow, good impact, UL-94 V0 rating at 1.2 mm, and improved chemical resistance to generally used hospital cleaners, make it ideal for a wide variety of applications including enclosures for medical and hospital equipment.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	650	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	550	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	4	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	90	%	ASTM D 638
Tensile Modulus, 50 mm/min	29500	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	1010	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	27500	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 50 mm/min	61	MPa	ISO 527
Tensile Stress, break, 50 mm/min	51	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	2700	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	100	MPa	ISO 178
Flexural Modulus, 2 mm/min	2500	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	61	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	12	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	642	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*3 +23°C	15	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	10	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	15	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	10	kJ/m ²	ISO 179/1eA





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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
THERMAL			
Vicat Softening Temp, Rate B/50	102	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	94	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	84	°C	ASTM D 648
HDT, 0.45 MPa, 6.4 mm, unannealed	98	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	90	°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	102	°C	ISO 306
Vicat Softening Temp, Rate B/120	102	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	84	°C	ISO 75/Af
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	22.5	g/10 min	ASTM D 1238
Density	1.19	g/cm ³	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	21	cm ³ /10 min	ISO 1133
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating (3)	1.2	mm	UL 94
UL Recognized, 94-5VB Rating (3)	2	mm	UL 94





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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	80 - 90	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.04	%
Melt Temperature	245 - 275	°C
Nozzle Temperature	245 - 275	°C
Front - Zone 3 Temperature	245 - 275	°C
Middle - Zone 2 Temperature	220 - 265	°C
Rear - Zone 1 Temperature	220 - 255	°C
Mold Temperature	60 - 80	°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

