CYCOLOY™ FR RESINS CY6110

REGION ASIA

DESCRIPTION

CYCOLOY CY6110 Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) blend is an impact modified, high flow injection moldable, non chlorinated/brominated flame retardant grade. It features good hydrostability and has a UL94 V0@1.5mm and 5VB@2.5mm flame rating.

TYPICAL PROPERTY VALUES

Revision 20190925

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	63	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	47	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	65	%	ASTM D 638
Tensile Modulus, 5 mm/min	2760	MPa	ASTM D 638
Tensile Stress, yield, 50 mm/min	63	MPa	ISO 527
Tensile Stress, break, 50 mm/min	46	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	35	%	ISO 527
Tensile Modulus, 1 mm/min	2750	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	94	MPa	ISO 178
Flexural Modulus, 2 mm/min	2440	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	475	J/m	ASTM D 256
Izod Impact, notched, -30°C	100	J/m	ASTM D 256
Izod Impact, notched 80*10*3 +23°C	45	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	10	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 +23°C	25	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	12	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	45	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	10	kJ/m²	ISO 179/1eA
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	33	kJ/m²	ISO 179/1eA
THERMAL			
CTE, -40°C to 40°C, flow	8.E+00	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.E+00	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	PASS	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	104	°C	ISO 306
Vicat Softening Temp, Rate B/120	106	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	98	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	88	°C	ISO 75/Af
Relative Temp Index, Elec	85	°C	UL 746B
Relative Temp Index, Mech w/impact	85	°C	UL 746B
Relative Temp Index, Mech w/o impact	85	°C	UL 746B
PHYSICAL			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Mold Shrinkage, flow, 3.2 mm	0.4 – 0.6	%	SABIC method
Density	1.18	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.6	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.2	%	ISO 62
Melt Volume Rate, MVR at 260°C/2.16 kg	23	cm³/10 min	ISO 1133
ELECTRICAL			
Hot Wire Ignition {PLC}	3	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	0	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	46	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 1.6 mm	31	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	2.9	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.002	-	IEC 60250
Dissipation Factor, 1 MHz	0.007	-	IEC 60250
Relative Permittivity, 50/60 Hz	2.9	-	IEC 60250
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating	1.5	mm	UL 94
UL Recognized, 94-5VB Flame Class Rating	2.5	mm	UL 94
Glow Wire Flammability Index 960°C, passes at	1	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	825	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 2.0 mm	825	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm	825	°C	IEC 60695-2-13
Oxygen Index (LOI)	31	%	ISO 4589
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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