CYCOLOY™ FR RESINS CY6414

REGION ASIA

DESCRIPTION

CYCOLOY CY6414 is an impact modified PC blend, medium flow and high heat resistant, injection moldable, non chlorinated/brominated flame retardant grade. It has a UL94 V0@1.2mm and 5VB@2.5mm flame rating.

TYPICAL PROPERTY VALUES

Revision 20200212

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	64	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	62	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	85	%	ASTM D 638
Tensile Modulus, 5 mm/min	2330	MPa	ASTM D 638
Tensile Strain, yield, 50 mm/min	5.7	%	ISO 527
Tensile Strain, break, 50 mm/min	>100	%	ISO 527
IMPACT			
Izod Impact, notched, 23°C	795	J/m	ASTM D 256
Izod Impact, notched, 0°C	525	J/m	ASTM D 256
Izod Impact, notched, -30°C	215	J/m	ASTM D 256
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	28	kJ/m²	ISO 179/1eA
Charpy 0°C, V-notch Edgew 80*10*3 sp=62mm	17	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	12	kJ/m²	ISO 179/1eA
THERMAL			
HDT, 1.82 MPa, 6.4 mm, unannealed	118	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	Pass	-	IEC 60695-10-2
Ball Pressure Test, 125°C +/- 2°C, by VDE	Pass	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	133	°C	ISO 306
Vicat Softening Temp, Rate B/120	134	°C	ISO 306
PHYSICAL			
Melt Flow Rate, 260°C/5.0 kgf	14	g/10 min	ASTM D 1238
Density	1.18	g/cm³	ISO 1183
ELECTRICAL			
Relative Permittivity, 1 kHz	3.01	-	ASTM D 150
Relative Permittivity, 1 MHz	2.95	-	ASTM D 150
Dissipation Factor, 1 kHz	0.0017	-	ASTM D 150
Dissipation Factor, 1 MHz	0.0088	-	ASTM D 150
Hot Wire Ignition {PLC}	2	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	1	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
Surface Resistivity, ROA	4.E+16	Ohm	IEC 60093

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Dissipation Factor, 1 MHz	0.0088	-	IEC 60250
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating	1.2	mm	UL 94
UL Recognized, 94-5VB Flame Class Rating	2.5	mm	UL 94
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, 1.5 mm, by VDE	775	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm, by VDE	775	°C	IEC 60695-2-13
Oxygen Index (LOI)	32	%	ISO 4589
INJECTION MOLDING			
Drying Temperature	90 – 100	°C	
Drying Time	2 – 4	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	250 – 300	°C	
Nozzle Temperature	230 – 290	°C	
Front - Zone 3 Temperature	240 – 300	°C	
Middle - Zone 2 Temperature	230 – 290	°C	
Rear - Zone 1 Temperature	210 – 260	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	60 – 90	°C	

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