CYCOLOY™ FR RESIN CS9610

REGION ASIA

DESCRIPTION

CYCOLOY CS9610 Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) blend is an injection moldable low smoke, non chlorinated/brominated flame retardant grade. It has good mechanical and impact properties and has a UL94 V0@2.0mm and 5VB@2.0mm flame rating.

TYPICAL PROPERTY VALUES

Revision 20190717

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	5	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	55	%	ASTM D 638
Tensile Modulus, 50 mm/min	2600	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	98	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2440	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	62	MPa	ISO 527
Tensile Stress, break, 50 mm/min	50	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4.8	%	ISO 527
Tensile Strain, break, 50 mm/min	>45	%	ISO 527
Tensile Modulus, 1 mm/min	2400	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	98	MPa	ISO 178
Flexural Modulus, 2 mm/min	2500	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	800	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	72	J	ASTM D 3763
Izod Impact, notched 80*10*3 +23°C	45	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	15	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	15	kJ/m²	ISO 179/1eA
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	118	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	105	°C	ASTM D 648
Vicat Softening Temp, Rate B/50	124	°C	ISO 306
Vicat Softening Temp, Rate B/120	127	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	106	°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	1.2	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.4 – 0.6	%	SABIC method
Melt Flow Rate, 260°C/5.0 kgf	15	g/10 min	ASTM D 1238

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Melt Volume Rate, MVR at 260°C/5.0 kg	12	cm³/10 min	ISO 1133
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E207780-600276	-	-
UL Recognized, 94-5VB Flame Class Rating	≥2	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	≥2	mm	UL 94
NBS Smoke Density, Flaming, Dmax	225	-	ASTM E 662
NBS Smoke Density, Flaming, Ds 1.5 min	40	-	ASTM E 662
NBS Smoke Density, Flaming, Ds 4 min	150	-	ASTM E 662
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	
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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