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 20260205

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	64	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	62	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	55	%	ASTM D638
Tensile Modulus, 50 mm/min	2600	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	98	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2440	MPa	ASTM D790
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 [1]			
Izod Impact, notched, 23°C	800	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	72	J	ASTM D3763
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 [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	118	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	105	°C	ASTM D648
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 [2]	90	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	90	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	90	°C	UL 746B
PHYSICAL [1]			
Specific Gravity	1.2	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm [3]	0.4 – 0.6	%	SABIC method
Melt Flow Rate, 260°C/5.0 kgf	15	g/10 min	ASTM D1238

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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 [2]			
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 E662
NBS Smoke Density, Flaming, Ds 1.5 min	40	-	ASTM E662
NBS Smoke Density, Flaming, Ds 4 min	150	-	ASTM E662
INJECTION MOLDING [4]			
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) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) 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.

(3) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.,The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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