

CYCOLOY™ CX7720 resin

Polycarbonate + ABS

SABIC Innovative Plastics Asia Pacific

Message:

Cycology resin CX7720 is a non brominated and non chlorinated flame retardant PC/ABS resin grade featuring high heat resistance and thin wall FR. It is UL-94 listed at 1.2 mm V0 and 1.5mm 5VB. Its high heat deflection temperature allows this product to be considered for applications requiring higher heat resistance than conventional FR PC/ABS.

General Information			
UL YellowCard	E207780-100028765		
Additive	Flame retardancy		
Features	Chlorine Free		
	Heat resistance, high		
	Bromine-free		
	Flame retardancy		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.22	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)			ASTM D1238
260°C/2.16 kg	9.0	g/10 min	ASTM D1238
260°C/5.0 kg	25	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	22.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 - 0.70	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.15	%	ISO 62
Equilibrium, 23°C, 50% RH	0.070	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2860	MPa	ASTM D638
--	2910	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	65.0	MPa	ASTM D638
Yield	65.0	MPa	ISO 527-2/50
Fracture ³	66.0	MPa	ASTM D638
Fracture	65.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	5.0	%	ASTM D638
Yield	5.0	%	ISO 527-2/50
Fracture ⁵	130	%	ASTM D638

Fracture	120	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	2820	MPa	ASTM D790
-- ⁷	2090	MPa	ISO 178
Flexural Stress			
--	97.0	MPa	ISO 178
Yield, 50.0mm span ⁸	99.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	12	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	63	J/m	ASTM D256
23°C	150	J/m	ASTM D256
-30°C ¹⁰	8.3	kJ/m ²	ISO 180/1A
23°C ¹¹	11	kJ/m ²	ISO 180/1A
23°C ¹²	8.9	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	62.5	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	122	°C	ASTM D648
0.45 MPa, unannealed, 6.40mm	124	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	110	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	115	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹³	110	°C	ISO 75-2/ Af
Vicat Softening Temperature			
--	127	°C	ASTM D1525, ISO 306/B50 12 ¹⁴
--	129	°C	ISO 306/B120
Linear thermal expansion coefficient			
Flow: -40 to 40°C	6.1E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	6.6E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Electrical	Nominal Value		Test Method
Comparative Tracking Index (CTI)	PLC 3		UL 746
High Amp Arc Ignition (HAI)	PLC 0		UL 746
Hot-wire Ignition (HWI)	PLC 2		UL 746
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
1.0 mm	V-1		UL 94
1.2 mm	V-0		UL 94
1.5 mm	5VB		UL 94
2.5 mm	5VA		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	91 - 99	°C	

Drying Time	2.0 - 4.0	hr
Drying Time, Maximum	8.0	hr
Suggested Max Moisture	0.040	%
Suggested Shot Size	40 - 80	%
Rear Temperature	260 - 299	°C
Middle Temperature	260 - 299	°C
Front Temperature	266 - 299	°C
Nozzle Temperature	266 - 299	°C
Processing (Melt) Temp	271 - 299	°C
Mold Temperature	60 - 88	°C
Back Pressure	0.345 - 0.689	MPa
Screw Speed	40 - 70	rpm
Vent Depth	0.038 - 0.076	mm

NOTE

1.	50 mm/min
2.	Type 1, 50mm/min
3.	Type 1, 50mm/min
4.	Type 1, 50mm/min
5.	Type 1, 50mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	80*10*4 sp=62mm
10.	80*10*3
11.	80*10*3
12.	80*10*4
13.	80*10*4 mm
14.	标准 B (120°C/h), 载荷2 (50N)

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