

CYCOLOY™ CX7211 resin

Polycarbonate + ABS

SABIC Innovative Plastics

Message:

CYCOLOY CX7211 PC/ABS resin is a non-filled, injection moldable grade which has UL 94 rating at 2.5 mm 5VA. CYCOLOY CX7211 resin provides all color options and features an excellent balance of flow, impact and heat properties, which makes it an excellent candidate for thin wall applications.

General Information			
UL YellowCard	E45329-578384		
Features	Impact resistance, good		
	Good liquidity		
	Heat resistance, medium		
Uses	Thin wall parts		
RoHS Compliance	RoHS compliance		
Appearance	Available colors		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.18	g/cm ³	ASTM D792
--	1.19	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (260°C/2.16 kg)	16	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	14.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.40 - 0.60	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.24	%	ISO 62
Equilibrium, 23°C, 50% RH	0.12	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2950	MPa	ASTM D638
--	2800	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	66.0	MPa	ASTM D638
Yield	62.0	MPa	ISO 527-2/50
Fracture ³	60.0	MPa	ASTM D638
Fracture	55.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	4.0	%	ASTM D638
Yield	4.0	%	ISO 527-2/50

Fracture ⁵	98	%	ASTM D638
Fracture	90	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	2750	MPa	ASTM D790
-- ⁷	2500	MPa	ISO 178
Flexural Stress			
--	100	MPa	ISO 178
Yield, 50.0mm span ⁸	103	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
	10		
-30°C	10	kJ/m ²	ISO 179/1eA
	40		
23°C	40	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength ¹⁰			ISO 179/1eU
	No Break		
-30°C	No Break		ISO 179/1eU
	No Break		
23°C	No Break		ISO 179/1eU
Notched Izod Impact			
-30°C	130	J/m	ASTM D256
23°C	630	J/m	ASTM D256
	10		
-30°C ¹¹	10	kJ/m ²	ISO 180/1A
	40		
23°C ¹²	40	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹³			ISO 180/1U

	No Break		
-30°C	No Break		ISO 180/1U
	No Break		
23°C	No Break		ISO 180/1U
Instrumented Dart Impact (23°C, Total Energy)	60.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	94.0	°C	ASTM D648
0.45 MPa, unannealed, 6.40mm	102	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	89.0	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	96.0	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹⁴	90.0	°C	ISO 75-2/Af
Vicat Softening Temperature	105	°C	ASTM D1525, ISO 306/B50, ISO 306/B120 ¹⁵
Ball Pressure Test (75°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			
Flow: -40 to 40°C	6.1E-5	cm/cm/°C	ASTM E831
Flow: -40 to 40°C	7.5E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	5.5E-5	cm/cm/°C	ASTM E831
Lateral: -40 to 40°C	7.5E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.20	W/m/K	ISO 8302
RTI Elec	90.0	°C	UL 746
RTI Imp	90.0	°C	UL 746
RTI	90.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms · cm	IEC 60093
Dielectric Strength			IEC 60243-1
0.800mm, in oil	35	kV/mm	IEC 60243-1
1.60mm, in oil	25	kV/mm	IEC 60243-1
3.20mm, in oil	17	kV/mm	IEC 60243-1
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	Unit	Test Method
Flame Rating			UL 94
1.25 mm	V-1		UL 94

1.50 mm	V-0		UL 94
2.00 mm	5VB		UL 94
2.50 mm	5VA		UL 94
Glow Wire Flammability Index (1.00 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			IEC 60695-2-13
1.00 mm	800	°C	IEC 60695-2-13
3.00 mm	800	°C	IEC 60695-2-13
Oxygen Index	32	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	82.2 - 87.8	°C	
Drying Time	3.0 - 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.040	%	
Suggested Shot Size	30 - 80	%	
Rear Temperature	221 - 254	°C	
Middle Temperature	221 - 266	°C	
Front Temperature	243 - 277	°C	
Nozzle Temperature	243 - 277	°C	
Processing (Melt) Temp	243 - 277	°C	
Mold Temperature	60.0 - 82.2	°C	
Back Pressure	0.345 - 0.689	MPa	
Screw Speed	40 - 70	rpm	
Vent Depth	0.038 - 0.076	mm	
NOTE			
1.	5.0 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*4 sp=62mm		
11.	80*10*4		
12.	80*10*4		
13.	80*10*4		
14.	80*10*4 mm		
15.	标准 B (120°C/h), 载荷2 (50N)		

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