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	E121562-474680		
Features	Good Flow Good Impact Resistance Medium Heat Resistance		
Uses	Thin-walled Parts		
Appearance	Colors Available		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity			
--	1.18	g/cm³	ASTM D792
--	1.19	g/cm³	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	cm³/10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.40 to 0.60	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.24	%	
Equilibrium, 23°C, 50% RH	0.12	%	
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
Break [3]	60.0	MPa	ASTM D638
Break	55.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield [4]	4.0	%	ASTM D638
Yield	4.0	%	ISO 527-2/50
Break [5]	98	%	ASTM D638

Break	90	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span [6]	2750	MPa	ASTM D790
-- [7]	2500	MPa	ISO 178
Flexural Stress			
--	100	MPa	ISO 178
Yield, 50.0 mm Span [8]	103	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength [9]			ISO 179/1eA
-30°C	10	kJ/m²	
23°C	40	kJ/m²	
Notched Izod Impact			
-30°C	130	J/m	ASTM D256
23°C	630	J/m	ASTM D256
-30°C [10]	10	kJ/m²	ISO 180/1A
23°C [11]	40	kJ/m²	ISO 180/1A
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, 3.20 mm	94.0	°C	ASTM D648
0.45 MPa, Unannealed, 6.40 mm	102	°C	ASTM D648
1.8 MPa, Unannealed, 3.20 mm	89.0	°C	ASTM D648
1.8 MPa, Unannealed, 6.40 mm	96.0	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span [12]	90.0	°C	ISO 75-2/Af
Vicat Softening Temperature	105	°C	ASTM D1525, ISO 306/B50, ISO 306/B120 [13]
Ball Pressure Test (75°C)	Pass		IEC 60695-10-2
CLTE			
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
Transverse : -40 to 40°C	5.5E-5	cm/cm/°C	ASTM E831
Transverse : -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 Str	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
Electric Strength			IEC 60243-1
0.800 mm, in Oil	35	kV/mm	
1.60 mm, in Oil	25	kV/mm	

3.20 mm, in Oil	17	kV/mm	
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		
1.50 mm	V-0		
2.00 mm	5VB		
2.50 mm	5VA		
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	
3.00 mm	800	°C	
Oxygen Index	32	%	ISO 4589-2
Injection	**Nominal Value**	**Unit**	
Drying Temperature	82.2 to 87.8	°C	
Drying Time	3.0 to 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.040	%	
Suggested Shot Size	30 to 80	%	
Rear Temperature	221 to 254	°C	
Middle Temperature	221 to 266	°C	
Front Temperature	243 to 277	°C	
Nozzle Temperature	243 to 277	°C	
Processing (Melt) Temp	243 to 277	°C	
Mold Temperature	60.0 to 82.2	°C	
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	40 to 70	rpm	
Vent Depth	0.038 to 0.076	mm	
NOTE			
1.	5.0 mm/min		
2.	Type I, 50 mm/min		
3.	Type I, 50 mm/min		
4.	Type I, 50 mm/min		
5.	Type I, 50 mm/min		
6.	1.3 mm/min		
7.	2.0 mm/min		
8.	1.3 mm/min		
9.	80*10*3 sp=62mm		
10.	80*10*3		
11.	80*10*3		

12.	80*10*4 mm
13.	Rate B (120°C/h), Loading 2 (50 N)

Recommended distributors for this material

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