

CYCOLOY™ CM6220 resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

CYCOLOY CM6220 resin is a mineral filled grade featuring of high modulus (6GPa), good flow and ductility, low warpage. It is of non-Br & non-Cl flame retardant systems intended to meet thin wall flame resistance and various environmental requirements.

General Information			
UL YellowCard	E207780-100492397		
Filler / Reinforcement	Mineral		
Features	Bromine Free		
	Chlorine Free		
	Ductile		
	Flame Retardant		
	Good Flow		
	Low Warpage		
Uses	Thin-walled Parts		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.39	g/cm³	ASTM D792
--	1.40	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (260°C/2.16 kg)	12	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.20 to 0.30	%	Internal Method
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	109		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	5850	MPa	ASTM D638
--	5570	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	55.0	MPa	ASTM D638
Yield	56.0	MPa	ISO 527-2/5
Break ³	34.0	MPa	ASTM D638
Break	30.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	3.0	%	ASTM D638
Yield	3.0	%	ISO 527-2/5
Break ⁵	15	%	ASTM D638

Break	6.0	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁶	6030	MPa	ASTM D790
-- ⁷	6160	MPa	ISO 178
Flexural Stress			
--	98.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	98.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	7.0	kJ/m ²	ISO 179/1eA
Notched Izod Impact			ASTM D256
-30°C	52	J/m	
23°C	95	J/m	
Instrumented Dart Impact (23°C, Total Energy)	30.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	92.0	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ¹⁰	94.0	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	85.0	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹¹	87.0	°C	ISO 75-2/Af
Vicat Softening Temperature	98.0	°C	ASTM D1525 ¹²
CLTE			ISO 11359-2
Flow : 23 to 80°C	3.4E-5	cm/cm/°C	
Transverse : 23 to 80°C	7.2E-5	cm/cm/°C	
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
0.800 mm	V-1		
	V-0		
1.50 mm	5VB		
Injection	Nominal Value	Unit	
Drying Temperature	85.0 to 95.0	°C	
Drying Time	4.0 to 6.0	hr	
Drying Time, Maximum	16	hr	
Rear Temperature	245 to 280	°C	
Middle Temperature	255 to 285	°C	
Front Temperature	255 to 285	°C	
Nozzle Temperature	255 to 285	°C	
Processing (Melt) Temp	255 to 285	°C	
Mold Temperature	70.0 to 90.0	°C	
NOTE			

1.	5.0 mm/min
2.	Type I, 5.0 mm/min
3.	Type I, 5.0 mm/min
4.	Type I, 5.0 mm/min
5.	Type I, 5.0 mm/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 mm
11.	80*10*4 mm
12.	Rate B (120°C/h), Loading 2 (50 N)

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