

CYCOLOY™ CM6220 resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Technical Data

Product Description

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

Filler / Reinforcement	• Mineral Filler		
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

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus		
-- ⁴	5850 MPa	ASTM D638
--	5570 MPa	ISO 527-2/1
Tensile Strength		
Yield ⁵	55.0 MPa	ASTM D638
Yield	56.0 MPa	ISO 527-2/5
Break ⁵	34.0 MPa	ASTM D638
Break	30.0 MPa	ISO 527-2/5
Tensile Elongation		
Yield ⁵	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 Strength		
-- ^{7,8}	98.0 MPa	ISO 178
Yield, 50.0 mm Span ⁶	98.0 MPa	ASTM D790

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	7.0 kJ/m²	ISO 179/1eA
Notched Izod Impact		ASTM D256
-30°C	52 J/m	
23°C	95 J/m	
Instrumented Dart Impact		ASTM D3763
23°C, Total Energy	30.0 J	



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Hardness	Nominal Value Unit	Test Method
Rockwell Hardness (R-Scale)	109	ASTM D785
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 ¹⁰	87.0 °C	ISO 75-2/Af
Vicat Softening Temperature	98.0 °C	ASTM D1525 ¹¹
CLTE		ISO 11359-2
Flow: 23 to 80°C	0.000034 cm/cm/°C	
Transverse: 23 to 80°C	0.000072 cm/cm/°C	
Flammability	Nominal Value Unit	Test Method
Flame Rating		UL 94
0.800 mm	V-1	
1.50 mm	• V-0 • 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	

