

CYCOLOY™ CM8622 resin

Polycarbonate + ABS

SABIC Innovative Plastics Europe

Message:

CYCOLOY CM8622 is a high heat PC/ABS blend offering high modulus, low CTE, good practical Impact with good aesthetics.

General Information			
Features	Good Impact Resistance		
	High Heat Resistance		
	Pleasing Surface Appearance		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.25	g/cm ³	ASTM D792
--	1.26	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (260°C/5.0 kg)	16	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	15.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Flow ¹	0.50 to 0.70	%	
Flow : 3.20 mm	0.40 to 0.60	%	
Across Flow ²	0.40 to 0.60	%	
Across Flow : 3.20 mm	0.30 to 0.50	%	
Water Absorption			ISO 62
Saturation, 23°C	0.20	%	
Equilibrium, 23°C, 50% RH	0.050	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ³	3600	MPa	ASTM D638
--	3600	MPa	ISO 527-2/1
Tensile Strength			
Yield ⁴	47.0	MPa	ASTM D638
Yield	50.0	MPa	ISO 527-2/5
Break ⁵	60.0	MPa	ASTM D638
Break	54.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁶	3.4	%	ASTM D638
Yield	3.5	%	ISO 527-2/5

Break ⁷	55	%	ASTM D638
Break	50	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁸	3650	MPa	ASTM D790
-- ⁹	3600	MPa	ISO 178
Flexural Stress			
--	90.0	MPa	ISO 178
Yield, 50.0 mm Span ¹⁰	90.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			
	8.0		
-30°C ¹¹	8.0	kJ/m ²	ISO 179/1eA
-30°C	8.0	kJ/m ²	ISO 179/2C
	12		
23°C ¹²	12	kJ/m ²	ISO 179/1eA
23°C	12	kJ/m ²	ISO 179/2C
Charpy Unnotched Impact Strength			
	100		
-30°C ¹³	100	kJ/m ²	ISO 179/1eU
-30°C	100	kJ/m ²	ISO 179/2U
	110		
23°C ¹⁴	110	kJ/m ²	ISO 179/1eU
23°C	110	kJ/m ²	ISO 179/2U
Notched Izod Impact			
-30°C	90	J/m	ASTM D256
23°C	250	J/m	ASTM D256
-30°C ¹⁵	8.0	kJ/m ²	ISO 180/1A
23°C ¹⁶	13	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
-30°C	1500	J/m	ASTM D4812
23°C	1700	J/m	ASTM D4812
-30°C ¹⁷	140	kJ/m ²	ISO 180/1U
23°C ¹⁸	140	kJ/m ²	ISO 180/1U

Instrumented Dart Impact			
23°C, Total Energy	50.0	J	ASTM D3763
--	85.0	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	129	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ¹⁹	129	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	112	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ²⁰	112	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	144	°C	ISO 306/A50
--	133	°C	ISO 306/B50
--	134	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			ISO 11359-2
Flow : -40 to 40°C	5.1E-5	cm/cm/°C	
Flow : -30 to 80°C	5.6E-5	cm/cm/°C	
Transverse : -40 to 40°C	6.4E-5	cm/cm/°C	
Transverse : -30 to 80°C	7.0E-5	cm/cm/°C	
Injection	Nominal Value	Unit	
Drying Temperature	110 to 120	°C	
Drying Time	2.0 to 6.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	30 to 80	%	
Rear Temperature	260 to 270	°C	
Middle Temperature	265 to 290	°C	
Front Temperature	270 to 300	°C	
Nozzle Temperature	260 to 290	°C	
Processing (Melt) Temp	270 to 300	°C	
Mold Temperature	60.0 to 100	°C	
Back Pressure	0.300 to 0.700	MPa	
Screw Speed	40 to 70	rpm	
Vent Depth	0.038 to 0.076	mm	
NOTE			
1.	Tensile Bar		
2.	Tensile Bar		
3.	5.0 mm/min		
4.	Type I, 5.0 mm/min		
5.	Type I, 5.0 mm/min		
6.	Type I, 5.0 mm/min		
7.	Type I, 5.0 mm/min		
8.	1.3 mm/min		

9.	2.0 mm/min
10.	1.3 mm/min
11.	80*10*4 sp=62mm
12.	80*10*4 sp=62mm
13.	80*10*4 sp=62mm
14.	80*10*4 sp=62mm
15.	80*10*4
16.	80*10*4
17.	80*10*4
18.	80*10*4
19.	80*10*4 mm
20.	80*10*4 mm

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