

CYCOLOY™ C7410 resin

Polycarbonate + ABS

SABIC Innovative Plastics Asia Pacific

Message:

CYCOLOY C7410 resin is a talc-filled PC+ABS, nonhalogenated FR for thinwall molding applications.

General Information			
UL YellowCard	E207780-299801		
Filler / Reinforcement	Talc		
Features	Flame Retardant		
	Halogen Free		
Uses	Thin-walled Parts		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.22	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (260°C/2.16 kg)	13	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	12.6	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.30 to 0.50	%	
Across Flow : 3.20 mm	0.30 to 0.50	%	
Water Absorption			ISO 62
Saturation, 23°C	0.26	%	
Equilibrium, 23°C, 50% RH	0.060	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	3310	MPa	ASTM D638
--	3350	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	54.0	MPa	ASTM D638
Yield	58.0	MPa	ISO 527-2/5
Break ³	44.0	MPa	ASTM D638
Break	38.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	3.5	%	ASTM D638
Yield	3.6	%	ISO 527-2/5
Break ⁵	74	%	ASTM D638
Break	78	%	ISO 527-2/5
Flexural Modulus			

50.0 mm Span ⁶	3180	MPa	ASTM D790
-- ⁷	3270	MPa	ISO 178
Flexural Stress			
--	95.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	96.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	11	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	71	J/m	ASTM D256
23°C	320	J/m	ASTM D256
-30°C ¹⁰	7.0	kJ/m ²	ISO 180/1A
23°C ¹¹	31	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	80.0	°C	ASTM D648
1.8 MPa, Unannealed, 6.40 mm	87.0	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹²	83.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	103	°C	ASTM D1525, ISO 306/B50 11 ¹³
--	106	°C	ISO 306/B120
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	6.0E-5	cm/cm/°C	
Transverse : -40 to 40°C	6.0E-5	cm/cm/°C	
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
0.800 mm	V-0		
0.00 mm	5VB		
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, 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	
11.	80*10*4	
12.	80*10*4 mm	
13.	Rate B (120°C/h), Loading 2 (50 N)	

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