

CYCOLOY™ C1200HF resin

Polycarbonate + ABS

SABIC Innovative Plastics

Message:

CYCOLOY C1200HF is the improved version of CYCOLOY C1200 and has been developed to provide enhanced productivity and surface appearance for

General Information			
UL YellowCard	E45329-236710		
Features	Good appearance		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.15	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR)			ISO 1133
260°C/2.16 kg	8.00	cm ³ /10min	ISO 1133
260°C/5.0 kg	22.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow ¹	0.50 - 0.70	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.60	%	ISO 62
Equilibrium, 23°C, 50% RH	0.20	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	115		ISO 2039-2
Ball Indentation Hardness (H 358/30)	96.0	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2400	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/5, ISO 527-2/50
Yield	55.0	MPa	ISO 527-2/5, ISO 527-2/50
Fracture	45.0	MPa	ISO 527-2/5, ISO 527-2/50
Tensile Strain			
Yield	5.0	%	ISO 527-2/5
Yield	4.0	%	ISO 527-2/50
Fracture	100	%	ISO 527-2/5
Fracture	> 50	%	ISO 527-2/50
Flexural Modulus ²	2300	MPa	ISO 178
Flexural Stress	80.0	MPa	ISO 178
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	63.0	mg	Internal method
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C ³	18	kJ/m ²	ISO 179/1eA

-30°C ⁴	30	kJ/m ²	ISO 179/1eA
23°C ⁵	45	kJ/m ²	ISO 179/1eA
23°C ⁶	50	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength ⁷			ISO 179/1eU
-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
Notched Izod Impact			ISO 180/1A
-30°C ⁸	20	kJ/m ²	ISO 180/1A
-30°C ⁹	30	kJ/m ²	ISO 180/1A
23°C ¹⁰	50	kJ/m ²	ISO 180/1A
23°C ¹¹	40	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength			ISO 180/1U
-30°C ¹²	No Break		ISO 180/1U
23°C ¹³	No Break		ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ¹⁴			
0.45 MPa, unannealed, 100 mm span	128	°C	ISO 75-2/Be
1.8 MPa, unannealed, 100 mm span	108	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	132	°C	ISO 306/B50
--	134	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			ISO 11359-2
Flow: -40 to 40°C	8.0E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	8.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.20	W/m/K	ISO 8302
RTI Elec	105	°C	UL 746
RTI Imp	80.0	°C	UL 746
RTI	105	°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
Dielectric Strength			IEC 60243-1
0.800mm, in oil	35	kV/mm	IEC 60243-1
1.60mm, in oil	25	kV/mm	IEC 60243-1
3.20mm, in oil	17	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	2.80		IEC 60250
60 Hz	2.80		IEC 60250
1 MHz	2.70		IEC 60250
Dissipation Factor			IEC 60250
50 Hz	2.0E-3		IEC 60250

60 Hz	2.0E-3		IEC 60250
1 MHz	7.0E-3		IEC 60250
Comparative Tracking Index (CTI)	PLC 2		UL 746
Comparative Tracking Index	250	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.20 mm	HB		UL 94
3.00 mm	HB		UL 94
Glow Wire Flammability Index (1.00 mm)	650	°C	IEC 60695-2-12
Oxygen Index	23	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	100 - 110	°C	
Drying Time	3.0 - 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	30 - 80	%	
Hopper Temperature	60.0 - 80.0	°C	
Rear Temperature	250 - 290	°C	
Middle Temperature	255 - 295	°C	
Front Temperature	260 - 300	°C	
Nozzle Temperature	275 - 300	°C	
Processing (Melt) Temp	275 - 300	°C	
Mold Temperature	60.0 - 90.0	°C	
Back Pressure	0.300 - 0.700	MPa	
Screw Speed	40 - 70	rpm	
Vent Depth	0.038 - 0.076	mm	
NOTE			
1.	Tensile Bar		
2.	2.0 mm/min		
3.	80*10*4 sp=62mm		
4.	80*10*3 sp=62mm		
5.	80*10*4 sp=62mm		
6.	80*10*3 sp=62mm		
7.	80*10*4 sp=62mm		
8.	80*10*4		
9.	80*10*3		
10.	80*10*3		
11.	80*10*4		
12.	80*10*4		
13.	80*10*3		
14.	120*10*4 mm		

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