

CYCOLOY* C1204HF Resin

Acrylonitrile Butadiene Styrene + PC

SABIC Innovative Plastics Europe

Product Description

High heat PC/ABS blend offering good flow and excellent impact. Food compliant according to FDA and European directive 2002/72/EC. Available in limited colors. Effective January 15th, 2008 this grade will no longer be supported with biocompatibility information and should not be used for medical applications which require biocompatibility. Alternative grade HC1204HF.

General

Material Status	• Commercial: Active
Availability	• Europe
Features	• Food Contact Acceptable • Good Flow • High Heat Resistance • High Impact Resistance
Agency Ratings	• EU 2002/72/EC • FDA Food Contact, Unspecified Rating
RoHS Compliance	• RoHS Compliant
Forms	• Pellets
Processing Method	• Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.15	g/cm ³	ASTM D792 ISO 1183
Melt Mass-Flow Rate (MFR) (260°C/5.0 kg)	24	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR)			ISO 1133
260°C/2.16 kg	8.00	cm ³ /10min	
260°C/5.0 kg	22.0	cm ³ /10min	
Molding Shrinkage - Flow			ASTM D955
--	0.50 to 0.70	%	
3.20 mm	0.50 to 0.70	%	
Water Absorption			ISO 62
Saturation, 23°C	0.60	%	
Equilibrium, 23°C, 50% RH	0.20	%	

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ²	2270	MPa	ASTM D638
--	2400	MPa	ISO 527-2/1
Tensile Strength			
Yield ³	57.0	MPa	ASTM D638
Yield	55.0	MPa	ISO 527-2/5 ISO 527-2/50
Break ³	47.0	MPa	ASTM D638
Break	45.0	MPa	ISO 527-2/5 ISO 527-2/50
Tensile Elongation			
Yield ³	5.0	%	ASTM D638
Yield	5.0	%	ISO 527-2/5
Yield	4.0	%	ISO 527-2/50
Break ³	100	%	ASTM D638
Break	100	%	ISO 527-2/5
Break	> 50	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁴	2300	MPa	ASTM D790
-- ⁵	2300	MPa	ISO 178
Flexural Strength			
-- ^{5, 6}	80.0	MPa	ISO 178
Yield, 50.0 mm Span ⁴	88.0	MPa	ASTM D790
Taber Abrasion Resistance			ASTM D1044
1000 Cycles, 1000 g, CS-17 Wheel	63.0	mg	

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备注：以上原料物性数据由厂家发布，我公司仅提供参考！数据如有变动，请联系原料生产厂家获知。我公司不承担任何法律责任！

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Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁷			ISO 179/1eA
-30°C	30	kJ/m ²	
23°C	50	kJ/m ²	
Notched Izod Impact			
-30°C	480	J/m	ASTM D256
23°C	580	J/m	ASTM D256
-30°C ⁸	30.0	kJ/m ²	ISO 180/1A
23°C ⁸	50.0	kJ/m ²	ISO 180/1A
Instrumented Dart Impact			ASTM D3763
23°C, Total Energy	54.0	J	
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
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed, 100 mm Span ⁹	122	°C	ISO 75-2/Be
1.8 MPa, Unannealed, 3.20 mm	112	°C	ASTM D648
1.8 MPa, Unannealed, 100 mm Span ⁹	102	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	130	°C	ASTM D1525 ¹⁰
--	126	°C	ISO 306/B50
--	128	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			
Flow: -40 to 40°C	0.000072	cm/cm/°C	ASTM E831
Flow: -40 to 40°C	0.000080	cm/cm/°C	ISO 11359-2
Transverse: -40 to 40°C	0.000072	cm/cm/°C	ASTM E831
Transverse: -40 to 40°C	0.000080	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.20	W/m/K	ISO 8302
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohm·cm	IEC 60093
Relative Permittivity			IEC 60250
50 Hz	2.80		
60 Hz	2.80		
1 MHz	2.70		
Dissipation Factor			IEC 60250
50 Hz	0.0020		
60 Hz	0.0020		
1 MHz	0.0070		
Comparative Tracking Index	250	V	IEC 60112
Electric Strength			IEC 60243-1
0.800 mm, in Oil	35	kV/mm	
1.60 mm, in Oil	25	kV/mm	
3.20 mm, in Oil	17	kV/mm	

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Flammability	Nominal Value	Unit	Test Method
Flame Rating - UL			UL 94
1.20 mm		HB	
3.00 mm		HB	
Glow Wire Flammability Index (1.00 mm)	650	°C	IEC 60695-2-12
Oxygen Index	23	%	ISO 4589-2
UL 746	Nominal Value	Unit	Test Method
RTI Str	105	°C	UL 746
RTI Imp	80.0	°C	UL 746
RTI Elec	105	°C	UL 746
Comparative Tracking Index (CTI) (PLC)	PLC 2		UL 746
Injection	Nominal Value	Unit	
Drying Temperature	100 to 110	°C	
Drying Time	2.0 to 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60.0 to 80.0	°C	
Rear Temperature	230 to 260	°C	
Middle Temperature	250 to 290	°C	
Front Temperature	250 to 290	°C	
Nozzle Temperature	240 to 280	°C	
Processing (Melt) Temp	260 to 290	°C	
Mold Temperature	60.0 to 90.0	°C	

Notes

¹ Typical properties: these are not to be construed as specifications.

² 5.0 mm/min

³ Type I, 50 mm/min

⁴ 1.3 mm/min

⁵ 2.0 mm/min

⁶ Yield

⁷ 80*10*3 sp=62mm

⁸ 80*10*3

⁹ 120*10*4 mm

¹⁰ Rate B (120°C/h), Loading 2 (50 N)

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