

LNP™ THERMOCOMP™ D151 compound

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

LNP* Thermocomp* D151 (experimental grade name as EXTC8274) is a compound based on Polycarbonate resin containing Glass Fiber, Flame Retardant. Added features of this material include: High modulus, good surface, good flatness, good ductility, Non-Brominated & Non-Chlorinated Flame Retardant.

General Information			
Filler / Reinforcement	Glass Fiber		
Additive	Flame Retardant		
Features	Bromine Free		
	Chlorine Free		
	Ductile		
	Flame Retardant		
	Good Surface Finish		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.27	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
300°C/1.2 kg	14	g/10 min	
300°C/2.16 kg	29	g/10 min	
Melt Volume-Flow Rate (MVR)			ISO 1133
300°C/1.2 kg	13.0	cm ³ /10min	
300°C/2.16 kg	27.0	cm ³ /10min	
Molding Shrinkage			ASTM D955
Flow : 24 hr	0.30 to 0.50	%	
Across Flow : 24 hr	0.30 to 0.50	%	
Water Absorption			ISO 62
Saturation, 23°C	0.080	%	
Equilibrium, 23°C, 50% RH	0.040	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	4400	MPa	ASTM D638
--	4430	MPa	ISO 527-2/1
Tensile Strength			
Break ²	83.0	MPa	ASTM D638
Break	82.0	MPa	ISO 527-2/5
Tensile Elongation			
Break ³	3.6	%	ASTM D638

Break	3.6	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁴	4070	MPa	ASTM D790
-- ⁵	4010	MPa	ISO 178
Flexural Stress			
--	133	MPa	ISO 178
Break, 50.0 mm Span ⁶	131	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁷ (23°C)	13	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength ⁸ (23°C)	50	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	150	J/m	ASTM D256
Unnotched Izod Impact (23°C)	710	J/m	ASTM D4812
Instrumented Dart Impact (23°C, Energy at Peak Load)	22.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 3.20 mm	121	°C	
1.8 MPa, Unannealed, 3.20 mm	117	°C	
CLTE			ISO 11359-2
Flow : 23 to 80°C	3.4E-5	cm/cm/°C	
Transverse : 23 to 80°C	7.7E-5	cm/cm/°C	
Electrical	Nominal Value		Test Method
Dielectric Constant			Internal Method
1.10 GHz	3.07		
1.90 GHz	3.06		
5.00 GHz	3.06		
10.0 GHz	3.05		
Dissipation Factor			Internal Method
1.10 GHz	6.7E-3		
1.90 GHz	6.5E-3		
5.00 GHz	6.9E-3		
10.0 GHz	6.9E-3		
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
0.300 mm	V-2		
0.400 mm	V-1		
0.600 mm	V-0		
Injection	Nominal Value	Unit	
Drying Temperature	110	°C	
Drying Time	3.0 to 6.0	hr	
Suggested Max Moisture	0.020	%	
Rear Temperature	260 to 280	°C	

Middle Temperature	270 to 290	°C
Front Temperature	280 to 300	°C
Nozzle Temperature	285 to 305	°C
Processing (Melt) Temp	285 to 310	°C
Mold Temperature	80.0 to 110	°C
Back Pressure	0.100 to 0.300	MPa
Screw Speed	50 to 90	rpm

NOTE

1.	5.0 mm/min
2.	Type I, 5.0 mm/min
3.	Type I, 5.0 mm/min
4.	1.3 mm/min
5.	2.0 mm/min
6.	1.3 mm/min
7.	80*10*4 sp=62mm
8.	80*10*4 sp=62mm

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