

LNP™ THERMOCOMP™ D451 compound

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

LNP THERMOCOMP D451 (or EXTC8141) is a compound based on Polycarbonate resin containing Glass Fiber, Flame Retardant. Added features of this material include: High modulus, good flatness, good ductility, Non-Brominated & Non-Chlorinated Flame Retardant.

General Information			
UL YellowCard	E207780-101265025		
Filler / Reinforcement	Glass Fiber		
Features	Bromine Free		
	Chlorine Free		
	Ductile		
	Flame Retardant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.52	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
300°C/2.16 kg	18	g/10 min	
300°C/5.0 kg	57	g/10 min	
Melt Volume-Flow Rate (MVR)			
300°C/5.0 kg	42.4	cm ³ /10min	ASTM D1238
300°C/2.16 kg	14.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ASTM D955
Flow : 24 hr	0.10 to 0.25	%	
Across Flow : 24 hr	0.10 to 0.25	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	11700	MPa	ASTM D638
Tensile Strength ² (Break)	143	MPa	ASTM D638
Tensile Elongation ³ (Break)	2.3	%	ASTM D638
Flexural Modulus ⁴ (50.0 mm Span)	9750	MPa	ASTM D790
Flexural Strength ⁵ (Break, 50.0 mm Span)	186	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁶ (23°C)	13	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength ⁷ (23°C)	33	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	140	J/m	ASTM D256
Unnotched Izod Impact (23°C)	520	J/m	ASTM D4812
Thermal	Nominal Value	Unit	Test Method

Deflection Temperature Under Load (1.8 MPa, Unannealed, 3.20 mm)	114	°C	ASTM D648
CLTE			ASTM E831
Flow : -40 to 40°C	1.5E-5	cm/cm/°C	
Transverse : -40 to 40°C	5.6E-5	cm/cm/°C	
Flammability	Nominal Value		Test Method
Flame Rating (0.800 mm)	V-0		UL 94
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.	1.3 mm/min		
6.	80*10*4 sp=62mm		
7.	80*10*4 sp=62mm		

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