

LNP™ THERMOCOMP™ D452 compound

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

LNP* Thermocomp* D452 (or EXTC8202) is a compound based on SABIC unique Polycarbonate copolymer resin containing Glass Fiber, Flame Retardant. Added features of this material include: High modulus, good flatness, good ductility, Non-Brominated & Non-Chlor

General Information			
UL YellowCard	E207780-101549550		
Filler / Reinforcement	Glass Fiber		
Additive	Flame Retardant		
Features	Bromine Free		
	Chlorine Free		
	Copolymer		
	Ductile		
	Flame Retardant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.52	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
300°C/1.2 kg	17	g/10 min	
300°C/2.16 kg	39	g/10 min	
Melt Volume-Flow Rate (MVR)			ISO 1133
300°C/1.2 kg	12.0	cm³/10min	
300°C/2.16 kg	30.0	cm³/10min	
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	12000	MPa	ASTM D638
--	11300	MPa	ISO 527-2/1
Tensile Strength			
Break ²	141	MPa	ASTM D638
Break	140	MPa	ISO 527-2/5
Tensile Elongation			
Break ³	2.3	%	ASTM D638
Break	2.2	%	ISO 527-2/5
Flexural Modulus			

50.0 mm Span ⁴	11700	MPa	ASTM D790
-- ⁵	10100	MPa	ISO 178
Flexural Stress			
--	189	MPa	ISO 178
Break, 50.0 mm Span ⁶	211	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)	41	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	150	J/m	ASTM D256
Unnotched Izod Impact (23°C)	620	J/m	ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed, 3.20 mm)	98.0	°C	ASTM D648
CLTE			ISO 11359-2
Flow : 23 to 80°C	1.6E-5	cm/cm/°C	
Transverse : 23 to 80°C	5.8E-5	cm/cm/°C	
Flammability	Nominal Value		Test Method
Flame Rating (1.00 mm)	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	90.0 to 100	°C	
Drying Time	3.0 to 5.0	hr	
Rear Temperature	265 to 280	°C	
Middle Temperature	270 to 310	°C	
Front Temperature	275 to 310	°C	
Nozzle Temperature	280 to 310	°C	
Processing (Melt) Temp	280 to 310	°C	
Mold Temperature	70.0 to 110	°C	
Back Pressure	0.300 to 1.00	MPa	
Screw Speed	20 to 100	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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