

LNP™ THERMOCOMP™ DF003E compound

Polycarbonate
SABIC Innovative Plastics

Message:

LNP THERMOCOMP DF003E is a compound based on Polycarbonate resin containing Glass Fiber. Added features of this material include: Easy Molding.
Also known as: LNP* THERMOCOMP* Compound DF-1003 EM
Product reorder name: DF003E

General Information			
UL YellowCard	E207780-101343856		
Filler / Reinforcement	Glass fiber reinforced material		
Features	Good formability		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.31	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage			
Flow: 24 hours	0.40 - 0.60	%	ASTM D955
Transverse flow: 24 hours	0.50 - 0.70	%	ASTM D955
Vertical flow direction: 24 hours	0.63	%	ISO 294-4
Flow direction: 24 hours	0.54	%	ISO 294-4
Water Absorption (24 hr, 50% RH)	0.10	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	4830	MPa	ASTM D638
--	4750	MPa	ISO 527-2/1
Tensile Strength			
Yield	82.7	MPa	ASTM D638
Yield	82.0	MPa	ISO 527-2
Fracture	77.2	MPa	ASTM D638
Fracture	78.0	MPa	ISO 527-2
Tensile Elongation			
Yield	3.2	%	ASTM D638
Yield	3.3	%	ISO 527-2
Fracture	5.0	%	ASTM D638
Fracture	4.4	%	ISO 527-2
Flexural Modulus			
--	4140	MPa	ASTM D790
--	4300	MPa	ISO 178
Flexural Stress	130	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			

23°C	80	J/m	ASTM D256
23°C ²	7.4	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	910	J/m	ASTM D4812
23°C ³	56	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			
23°C, Energy at Peak Load	20.4	J	ASTM D3763
--	6.70	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	144	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ⁴	144	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	139	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ⁵	139	°C	ISO 75-2/Af
Linear thermal expansion coefficient			
Flow: -40 to 40°C	6.8E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	3.4E-5	cm/cm/°C	ASTM E831
Lateral: -40 to 40°C	3.5E-5	cm/cm/°C	ISO 11359-2
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.020	%	
Rear Temperature	293 - 304	°C	
Middle Temperature	310 - 321	°C	
Front Temperature	321 - 332	°C	
Processing (Melt) Temp	304 - 327	°C	
Mold Temperature	82.2 - 110	°C	
Back Pressure	0.172 - 0.344	MPa	
Screw Speed	30 - 60	rpm	
NOTE			
1.	50 mm/min		
2.	80*10*4		
3.	80*10*4		
4.	80*10*4 mm		
5.	80*10*4 mm		

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