LNP™ THERMOCOMP™ Compound FF004

DESCRIPTION

LNP THERMOCOMP FF004 is a compound based on Polyethylene (PE) resin containing 20% Glass Fiber.

GENERAL INFORMATION	
Features	High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polyethylene, Unspecified (PE, Unspecified)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Consumer	Consumer Goods, Sport/Leisure
Hygiene and Healthcare	General Healthcare
Industrial	Industrial General

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break	40	MPa	ASTM D638
Tensile Stress, yld, Type I, 5 mm/min	40	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	35	MPa	ASTM D638
Tensile Strain, break	4.3	%	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	3	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	4.6	%	ASTM D638
Tensile Modulus, 50 mm/min	4210	MPa	ASTM D638
Flexural Stress	48	MPa	ASTM D790
Flexural Stress, yld, 1.3 mm/min, 50 mm span	54	MPa	ASTM D790
Flexural Modulus	2410	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2980	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	37	MPa	ISO 527
Tensile Stress, break, 5 mm/min	31	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.5	%	ISO 527
Tensile Strain, break, 5 mm/min	4.2	%	ISO 527
Tensile Modulus, 1 mm/min	3420	MPa	ISO 527
Flexural Stress	51	MPa	ISO 178
Flexural Modulus, 2 mm/min	2840	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	337	J/m	ASTM D4812
Izod Impact, notched, 23°C	65	J/m	ASTM D256
Multiaxial Impact	3	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	10	J	ASTM D3763

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, unnotched 80*10*4 +23°C	17	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	126	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	102	°C	ASTM D648
CTE, -30°C to 30°C, flow	5.6E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	1.23E-04	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	121	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	92	°C	ISO 75/Af
PHYSICAL [1]			
Specific Gravity	1.09	-	ASTM D792
Density	1.08	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.02	%	ASTM D570
Moisture Absorption (23°C / 50% RH)	0.01	%	ISO 62
INJECTION MOLDING [2]			
Drying Temperature	80	°C	
Drying Time	2 – 4	Hrs	
Melt Temperature	230	°C	
Front - Zone 3 Temperature	220 – 230	°C	
Middle - Zone 2 Temperature	210 – 220	°C	
Rear - Zone 1 Temperature	195 – 205	°C	
Mold Temperature	40 – 55	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	rpm	

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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