LNP™ THERMOCOMP™ Compound MF004ALS

DESCRIPTION

LNP THERMOCOMP MF004ALS compound is based on Polypropylene (PP) resin containing 20% glass fiber. Added features of this grade include: Heat Stabilized, Low Extractables and Food Contact compliant.

GENERAL INFORMATION	
Features	Heat Stabilized, Low Extractable, Food contact, High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polypropylene, Unspecified (PP, Unspecified)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Water Management
Consumer	Consumer Goods, Home Appliances
Packaging	Food & Beverage

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break	63	MPa	ASTM D638
Tensile Strain, break	2.3	%	ASTM D638
Tensile Modulus, 50 mm/min	4550	MPa	ASTM D638
Flexural Stress	92	MPa	ASTM D790
Flexural Modulus	4340	MPa	ASTM D790
Tensile Stress, break	65	MPa	ISO 527
Tensile Strain, break	2.2	%	ISO 527
Tensile Modulus, 1 mm/min	5100	MPa	ISO 527
Flexural Stress	104	MPa	ISO 178
Flexural Modulus	5600	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	325	J/m	ASTM D4812
Izod Impact, notched, 23°C	48	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	8	J	ASTM D3763
Multiaxial Impact	1	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	20	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	160	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	149	°C	ASTM D648
CTE, -40°C to 40°C, xflow	7.45E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.45E-05	1/°C	ISO 11359-2

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	145	°C	ISO 75/Af
PHYSICAL [1]			
Density	1.034	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.03	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.4 – 0.7	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	0.9 – 1	%	ASTM D955
Mold Shrinkage, flow, 24 hrs [2]	0.72	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [2]	0.95	%	ISO 294
Density	1.03	g/cm³	ISO 1183
INJECTION MOLDING [3]			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Melt Temperature	225 – 250	°C	
Front - Zone 3 Temperature	240 – 250	°C	
Middle - Zone 2 Temperature	215 – 225	°C	
Rear - Zone 1 Temperature	195 – 205	°C	
Mold Temperature	30 – 50	°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) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(3) 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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