LNP™ THERMOCOMP™ Compound DF004EXP

DESCRIPTION

LNP THERMOCOMP DF004EXP compound is based on Polycarbonate (PC) resin containing 20% glass fiber. Added features of this grade include: Easy Molding.

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

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Personal Accessory
Industrial	Electrical, Industrial General

TYPICAL PROPERTY VALUES

Revision 20240215

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Modulus, 5 mm/min	4552	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	67	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	7	%	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	126	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	4050	MPa	ASTM D790
Tensile Modulus, 1 mm/min	4632	MPa	ISO 527
Tensile Stress, break, 5 mm/min	70	MPa	ISO 527
Tensile Strain, break, 5 mm/min	5	%	ISO 527
Flexural Modulus, 2 mm/min	4578	MPa	ISO 178
Flexural Stress, break, 2 mm/min	128	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	690	J/m	ASTM D4812
Izod Impact, notched, 23°C	62	J/m	ASTM D256
Izod Impact, unnotched 80*10*4 +23°C	54	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	6	kJ/m²	ISO 180/1A
THERMAL			
Vicat Softening Temp, Rate B/50	153	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	136	°C	ISO 75/Af
PHYSICAL [1]			
Specific Gravity	1.36	-	ASTM D792
Density	1.36	g/cm³	ISO 1183
Moisture Absorption, (23°C/50% RH/24 hrs)	-0.0073	%	ASTM D570

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Water Absorption, (23°C/24hrs) [2]	0.07	%	ISO 62-1
Mold Shrinkage, flow, 24 hrs [3]	0.14	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [3]	0.21	%	ASTM D955
INJECTION MOLDING [4]			
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	305 – 325	°C	
Front - Zone 3 Temperature	320 – 330	°C	
Middle - Zone 2 Temperature	310 – 320	°C	
Rear - Zone 1 Temperature	295 – 305	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.02 – 0.03	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) Based on internal method similar to ISO 62

(3) 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.

(4) 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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