LNP™ THERMOCOMP™ Compound LFW55EX1

DESCRIPTION

LNP THERMOCOMP LFW55EX1 compound is based on Polyetheretherketone (PEEK) resin containing 25% glass fiber and 25% mineral. Added features of this material include: Easy Molding, Dimensional Stability.

GENERAL INFORMATION	
Features	High Flow, Dimensional stability, No PFAS intentionally added
Fillers	Mineral, Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polyetheretherketone (PEEK)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Consumer	Commercial Appliance
Electrical and Electronics	Electronic Components, Mobile Phone - Computer - Tablets
Industrial	Electrical, Material Handling

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Flexural Strength, 1.3 mm/min, 50 mm span	218	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	14150	MPa	ASTM D790
Tensile Stress, brk, Type I, 5 mm/min	166	MPa	ASTM D638
Tensile Modulus, 5 mm/min	16400	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1.65	%	ASTM D638
Flexural Strength, 2 mm/min	215	MPa	ISO 178
Flexural Modulus, 2 mm/min	14000	MPa	ISO 178
Tensile Stress, break, 5 mm/min	147	MPa	ISO 527
Tensile Modulus, 1 mm/min	16000	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.9	%	ISO 527
IMPACT [1]			
Izod Impact, notched, 23°C	45	J/m	ASTM D256
Izod Impact, unnotched, 23°C	483	J/m	ASTM D4812
Izod Impact, notched 80*10*4 +23°C	6	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	34	kJ/m²	ISO 180/1U
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	40	kJ/m²	ISO 179/1eU
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	320	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	330	°C	ASTM D648
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	320	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	330	°C	ISO 75/Bf
CTE, 23°C to 60°C, flow	1.7E-05	1/°C	ISO 11359-2

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, 23°C to 60°C, xflow	3.4E-05	1/°C	ISO 11359-2
PHYSICAL [1]			
Specific Gravity	1.81	-	ASTM D792
Mold Shrinkage, flow [2]	0.3 – 0.4	%	SABIC method
Mold Shrinkage, xflow [2]	0.7 – 0.9	%	SABIC method
Density	1.81	g/cm³	ASTM D792
Moisture Absorption (23°C / 50% RH)	0.01	%	ISO 62
INJECTION MOLDING [3]			
Drying Temperature	120 – 150	°C	
Drying Time	3 – 5	Hrs	
Nozzle Temperature	380 – 400	°C	
Melt Temperature	380 – 400	°C	
Front - Zone 3 Temperature	370 – 380	°C	
Middle - Zone 2 Temperature	360 – 370	°C	
Rear - Zone 1 Temperature	290 – 300	°C	
Mold Temperature	170 – 200	°C	

(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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