LNP™ THERMOCOMP™ COMPOUND EC008APQ

EC008APQ

DESCRIPTION

LNP THERMOCOMP EC008APQ compound is based on Polyetherimide (PEI) resin containing 40% carbon fiber. Added features of this grade include: Electrically Conductive, High Flow. FAR25.853 Compliant.

GENERAL INFORMATION	
Features	Flame Retardant, Electrically Conductive, High Flow, Carbon fiber filled, High stiffness/Strength, High temperature resistance, No PFAS intentionally added
Fillers	Carbon Fiber
Polymer Types	Polyetherimide (PEI)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Under the Hood, Aerospace
Building and Construction	Building Component
Consumer	Sport/Leisure
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	268	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1	%	ASTM D638
Tensile Modulus, 5 mm/min	39420	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	356	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	31300	MPa	ASTM D790
Hardness, Rockwell M	112	-	ASTM D785
Tensile Stress, break, 5 mm/min	247	MPa	ISO 527
Tensile Strain, break, 5 mm/min	0.9	%	ISO 527
Tensile Modulus, 1 mm/min	35480	MPa	ISO 527
Flexural Stress	364	MPa	ISO 178
Flexural Modulus, 2 mm/min	30560	MPa	ISO 178
Compressive Strength	218	MPa	SABIC method
Shear Modulus	4656	MPa	ASTM D732
Shear Strength	120	MPa	ASTM D732
IMPACT [1]			
Izod Impact, unnotched, 23°C	560	J/m	ASTM D4812
Izod Impact, notched, 23°C	64	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	7	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	33	kJ/m²	ISO 180/1U

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched 80*10*4 +23°C	6	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	193	°C	ASTM D648
CTE, -40°C to 150°C, flow	3.E-06	1/°C	ASTM E831
CTE, -40°C to 150°C, xflow	4.E-05	1/°C	ASTM E831
PHYSICAL [1]			
Specific Gravity	1.44	-	ASTM D792
Density	1.433	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.11	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.1 – 0.3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	0.1 – 0.5	%	ASTM D955
Melt Flow Rate, 380°C/6.7 kgf	40	g/10 min	ASTM D1238
Poisson's Ratio	0.44	-	ASTM E132
ELECTRICAL [1]			
Volume Resistivity	4.1E+03	Ω.cm	ASTM D257
Surface Resistivity	4.5E+02	Ω	ASTM D257
INJECTION MOLDING [3]			
Drying Temperature	150	°C	
Drying Time	4 – 6	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	360 – 400	°C	
Rear - Zone 1 Temperature	360 – 380	°C	
Middle - Zone 2 Temperature	370 – 390	°C	
Front - Zone 3 Temperature	380 – 400	°C	
Nozzle Temperature	390 – 400	°C	
Mold Temperature	140 – 180	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw speed (Circumferential speed)	0.2 – 0.3	m/s	
Vent Depth	0.025 – 0.076	mm	

(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.

DISCLAIMER