LNP™ STAT-KON™ COMPOUND EEF42

ECF-1006

DESCRIPTION

LNP STAT-KON EEF42 compound is based on Polyetherimide (PEI) resin containing 10% carbon fiber, 20% glass fiber. Added features of this grade include: Electrically Conductive.

GENERAL INFORMATION	
Features	Electrically Conductive, Carbon fiber filled, High stiffness/Strength, High temperature resistance
Fillers	Carbon Fiber, Glass Fiber
Polymer Types	Polyetherimide (PEI)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Electronic Components
Industrial	Material Handling

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yield, 5 mm/min	179	MPa	ISO 527
Tensile Stress, break, 5 mm/min	179	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	1.5	%	ISO 527
Tensile Strain, break, 5 mm/min	1.5	%	ISO 527
Tensile Modulus, 1 mm/min	13990	MPa	ISO 527
Flexural Modulus, 2 mm/min	13330	MPa	ISO 178
Tensile Stress, yld, Type I, 5 mm/min	191	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	183	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	1.7	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1.7	%	ASTM D638
Tensile Modulus, 5 mm/min	14820	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	264	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	13800	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	7	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	28	kJ/m²	ISO 180/1U
Multiaxial Impact	3	J	ISO 6603
Izod Impact, notched, 23°C	70	J/m	ASTM D256
Izod Impact, unnotched, 23°C	1320	J/m	ASTM D4812
Instrumented Dart Impact Total Energy, 23°C	11	J	ASTM D3763
THERMAL [1]			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	214	°C	ISO 75/Bf

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	210	°C	ISO 75/Af
HDT, 0.45 MPa, 3.2 mm, unannealed	213	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	210	°C	ASTM D648
CTE, -40°C to 40°C, flow	3.30E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	3.80E-05	1/°C	ASTM E831
PHYSICAL (1)			
Moisture Absorption (23°C / 50% RH)	0.22	%	ISO 62
Density	1.46	g/cm³	ASTM D792
Specific Gravity	1.48	-	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.14	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	0.1 – 0.3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	0.3 – 0.5	%	ASTM D955
ELECTRICAL (1)			
Surface Resistivity (3)	1.E+03 – 1.E+06	Ω	ASTM D257
INJECTION MOLDING (4)			
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) Measurement meets requirements as specified in ASTM D4496.

(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.

DISCLAIMER