LNP™ STAT-KON™ Compound RFD04

RF-20

DESCRIPTION

LNP STAT-KON* RFD04 is a compound based on Nylon 66 resin containing 20% Glass Fiber. Added features of this material include: Electrically Conductive.

GENERAL INFORMATION	
Features	Electrically Conductive, High stiffness/Strength, No PFAS intentionally added
Fillers	Carbon Powder, Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polyamide 66 (Nylon 66)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Electronic Components
Industrial	Material Handling

TYPICAL PROPERTY VALUES

Revision 20241028

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	124	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1.6	%	ASTM D638
Tensile Modulus, 50 mm/min	9200	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	190	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	8540	MPa	ASTM D790
Tensile Stress, break	117	MPa	ISO 527
Tensile Stress, break, 5 mm/min	119	MPa	ISO 527
Tensile Strain, break	1.3	%	ISO 527
Tensile Strain, break, 5 mm/min	1.6	%	ISO 527
Tensile Modulus, 1 mm/min	8780	MPa	ISO 527
Flexural Stress	185	MPa	ISO 178
Flexural Modulus	8600	MPa	ISO 178
Flexural Modulus, 2 mm/min	8170	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	301	J/m	ASTM D4812
Izod Impact, notched, 23°C	36	J/m	ASTM D256
Multiaxial Impact	1	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	3	J	ASTM D3763
Izod Impact, unnotched 80*10*3 +23°C	20	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	3	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	259	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	248	°C	ASTM D648

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -30°C to 30°C, flow	3.4E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	6.1E-05	1/°C	ASTM D696
CTE, -40°C to 40°C, flow	3.22E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.46E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	257	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	242	°C	ISO 75/Af
PHYSICAL (1)			
Specific Gravity	1.4	-	ASTM D792
Density	1.39	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.5	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	0.5 – 0.7	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	1 – 3	%	ASTM D955
Mold Shrinkage, flow, 24 hrs (2)	0.61	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (2)	1.35	%	ISO 294
Density	1.39	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.75	%	ISO 62
ELECTRICAL (1)			
Surface Resistivity (3)	1.E+03 – 1.E+07	Ω	ASTM D257
INJECTION MOLDING (4)			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.15 – 0.25	%	
Melt Temperature	280 – 305	°C	
Front - Zone 3 Temperature	295 – 305	°C	
Middle - Zone 2 Temperature	280 – 295	°C	
Rear - Zone 1 Temperature	265 – 275	°C	
Mold Temperature	95 – 110	°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) 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.

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