LNP™ STAT-KON™ COMPOUND REL42

RCL-4042

DESCRIPTION

LNP STAT-KON REL42 compound is based on Nylon 6/6 resin containing 20% PTFE, 10% carbon fiber. Added features of this grade include: Electrically Conductive, Internally Lubricated, Wear Resistant.

GENERAL INFORMATION	
Features	Electrically Conductive, Wear resistant, Carbon fiber filled, High stiffness/Strength
Fillers	Carbon Fiber, PTFE
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 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yield	132	MPa	ASTM D638
Tensile Stress, break	132	MPa	ASTM D638
Tensile Strain, yield	2.5	%	ASTM D638
Tensile Strain, break	2.5	%	ASTM D638
Tensile Modulus, 5 mm/min	8270	MPa	ASTM D638
Tensile Stress, yield	133	MPa	ISO 527
Tensile Stress, break	133	MPa	ISO 527
Tensile Strain, yield	2.2	%	ISO 527
Tensile Strain, break	2.2	%	ISO 527
Tensile Modulus, 1 mm/min	8690	MPa	ISO 527
Flexural Stress	186	MPa	ISO 178
Flexural Modulus	7400	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	443	J/m	ASTM D4812
Izod Impact, notched, 23°C	42	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	8	J	ASTM D3763
Multiaxial Impact	1	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	29	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	4	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	260	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	247	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, flow	3.60E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.92E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	3.60E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.90E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	258	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	242	°C	ISO 75/Af
PHYSICAL (1)			
Density	1.32	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.6	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	0.3 – 0.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	1.1 – 1.3	%	ASTM D955
Mold Shrinkage, flow, 24 hrs (2)	0.36	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (2)	1.2	%	ISO 294
Density	1.32	g/cm³	ISO 1183
ELECTRICAL (1)			
Surface Resistivity (3)	1.E+02 – 1.E+06	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.

DISCLAIMER