LNP™ STAT-KON™ COMPOUND REL33

RCL-4033

DESCRIPTION

LNP STAT-KON REL33 compound is based on Nylon 6/6 resin containing 15% carbon fiber, 15% PTFE. Added features of this grade include: Electrically Conductive, 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 20230607

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	169	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	169	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	2.7	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.7	%	ASTM D638
Tensile Modulus, 50 mm/min	12520	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	237	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	237	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	8730	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	164	MPa	ISO 527
Tensile Stress, break, 5 mm/min	164	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.4	%	ISO 527
Tensile Strain, break, 5 mm/min	2.4	%	ISO 527
Tensile Modulus, 1 mm/min	11710	MPa	ISO 527
Flexural Stress	231	MPa	ISO 178
Flexural Modulus, 2 mm/min	8580	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	732	J/m	ASTM D4812
Izod Impact, notched, 23°C	58	J/m	ASTM D256
Multiaxial Impact	2	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	7	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	44	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	6	kJ/m²	ISO 180/1A

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	261	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	253	°C	ASTM D648
CTE, -30°C to 30°C, flow	2.E-06	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	9.E-06	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	260	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	244	°C	ISO 75/Af
PHYSICAL [1]			
Specific Gravity	1.29	-	ASTM D792
Density	1.3	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.61	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.3 – 0.6	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	0.8 – 1	%	ASTM D955
Density	1.29	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.9	%	ISO 62
ELECTRICAL [1]			
Surface Resistivity [3]	1.E+01 – 1.E+04	Ω	ASTM D257
INJECTION MOLDING [4]			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.15 – 0.25	%	
Melt Temperature	275 – 290	°C	
Front - Zone 3 Temperature	295 – 305	°C	
Middle - Zone 2 Temperature	280 – 295	°C	
Rear - Zone 1 Temperature	265 – 275	°C	
Mold Temperature	80 – 95	°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.

MORE INFORMATION

For curve data and CAE cards, please visit and register at https://materialfinder.sabic-specialties.com

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