LNP™ STAT-KON™ COMPOUND RE002XXP

DESCRIPTION

LNP STAT-KON RE002XXP compound is based on Nylon 6/6 resin containing 10% carbon fiber. Added features of this grade include: Electrically Conductive.

GENERAL INFORMATION	
Features	Electrically Conductive, Carbon fiber filled, High stiffness/Strength, No PFAS intentionally added
Fillers	Carbon Fiber
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 20240902

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	140	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.5	%	ASTM D638
Tensile Modulus, 5 mm/min	9600	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	210	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	7000	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	145	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.4	%	ISO 527
Tensile Modulus, 1 mm/min	9800	MPa	ISO 527
Flexural Strength, 2 mm/min	207	MPa	ISO 178
Flexural Modulus, 2 mm/min	7700	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, 23°C	32	J/m	ASTM D256
Izod Impact, unnotched, 23°C	290	J/m	ASTM D4812
Izod Impact, notched 80*10*4 +23°C	3.5	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	21	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	3.7	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	23	kJ/m²	ISO 179/1eU
Instrumented Dart Impact Total Energy, 23°C	5.8	J	ASTM D3763
Instrumented Dart Impact Energy @ peak, 23°C	5.8	J	ASTM D3763
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	260	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	246	°C	ASTM D648
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	260	°C	ISO 75/Bf

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	245	°C	ISO 75/Af
CTE, -40°C to 40°C, flow	2.01E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	8.09E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	2.07E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.58E-05	1/°C	ISO 11359-2
PHYSICAL (1)			
Specific Gravity	1.18	-	ASTM D792
Density	1.18	g/cm³	ISO 1183
Melt Flow Rate, 280°C/1.2 kgf	20	g/10 min	ASTM D1238
Melt Flow Rate, 280°C/2.16 kgf	35	g/10 min	ASTM D1238
Melt Volume Rate, MVR at 280°C/1.2 kg	20	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 280°C/2.16 kg	37	cm³/10 min	ISO 1133
Water Absorption, (23°C/24hrs)	0.98	%	ISO 62-1
Moisture Absorption, (23°C/50% RH/24hrs)	0.15	%	ISO 62-4
Mold Shrinkage, flow (2)	0.3 – 0.4	%	SABIC method
Mold Shrinkage, xflow (2)	1.0 – 1.1	%	SABIC method
ELECTRICAL (1)			
Surface Resistivity	1E+05 – 1E+06	Ω	ASTM D257
Volume Resistivity	1E+07 – 1E+08	Ω.cm	ASTM D257
INJECTION MOLDING (3)			
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) 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