LNP™ STAT-KON™ COMPOUND DE0049F

DC-1004 FR SM

DESCRIPTION

LNP STAT-KON DE0049F compound is based on Polycarbonate (PC) resin containing 20% carbon fiber. Added features of this grade include: Electrically Conductive, Flame Retardant, Superior Molding.

GENERAL INFORMATION	
Features	Flame Retardant, Electrically Conductive, High Flow, Carbon fiber filled, High stiffness/Strength
Fillers	Carbon Fiber
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Electronic Components
Industrial	Material Handling

TYPICAL PROPERTY VALUES

Revision 20230713

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	137	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	137	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	1.9	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1.9	%	ASTM D638
Tensile Modulus, 50 mm/min	13420	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	11550	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	134	MPa	ISO 527
Tensile Stress, break, 5 mm/min	134	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	1.6	%	ISO 527
Tensile Strain, break, 5 mm/min	1.6	%	ISO 527
Tensile Modulus, 1 mm/min	14970	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	166	MPa	ISO 178
Flexural Strain, break, 2 mm/min	166	%	ISO 178
Flexural Modulus, 2 mm/min	11650	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	488	J/m	ASTM D4812
Izod Impact, notched, 23°C	47	J/m	ASTM D256
Izod Impact, unnotched 80*10*4 +23°C	29	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	146	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	143	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.23E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.79E-05	1/°C	ASTM E831
CTE, 23°C to 60°C, flow	1.23E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	6.79E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	148	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	144	°C	ISO 75/Af
Relative Temp Index, Elec (2)	80	°C	UL 746B
Relative Temp Index, Mech w/impact (2)	80	°C	UL 746B
Relative Temp Index, Mech w/o impact (2)	80	°C	UL 746B
PHYSICAL (1)			
Density	1.33	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.13	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (3)	0.1 – 0.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (3)	0.3 – 0.7	%	ASTM D955
Density	1.33	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.18	%	ISO 62
ELECTRICAL (1)			
Surface Resistivity (4)	1.E+01 – 1.E+03	Ω	ASTM D257
FLAME CHARACTERISTICS (2)			
UL Yellow Card Link	E121562-101283793	-	-
UL Recognized, 94V-0 Flame Class Rating	1.5	mm	UL 94
INJECTION MOLDING (5)			
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	305 – 325	°C	
Front - Zone 3 Temperature	320 – 330	°C	
Middle - Zone 2 Temperature	310 – 320	°C	
Rear - Zone 1 Temperature	295 – 305	°C	
Mold Temperature	80 – 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) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.
(3) 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.
(4) Measurement meets requirements as specified in ASTM D4496.
(5) 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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