LNP™ STAT-KON™ Compound PFG03EL

DESCRIPTION

LNP STAT-KON PFG03EL compound is based on Nylon 6 resin containing glass fiber and proprietary thermal filler. Added feature of this grade include: Electrically Conductive.

GENERAL INFORMATION	
Features	Conductive, Electrically Conductive, Food contact, No PFAS intentionally added
Fillers	Graphite, Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polyamide 6 (Nylon 6)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Electrical Components and Infrastructure
Industrial	Industrial Material Handling
Industry	IndustrySegment
Packaging	Food & Beverage

TYPICAL PROPERTY VALUES

Revision 20250606

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Modulus, 1 mm/min	13000	MPa	ISO 527
Tensile Stress, break, 5 mm/min	100	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.3	%	ISO 527
Flexural Modulus, 2 mm/min	12250	MPa	ISO 178
Flexural Stress, break, 2 mm/min	140	MPa	ISO 178
Tensile Modulus, 5 mm/min	13000	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	80	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1.1	%	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	12500	MPa	ASTM D790
Flexural Strength, 1.3 mm/min, 50 mm span	150	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	15	kJ/m²	ISO 180/1U
Izod Impact, notched, 23°C	50	J/m	ASTM D256
Izod Impact, unnotched, 23°C	210	J/m	ASTM D4812
Charpy			
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	10	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	15	kJ/m²	ISO 179/1eU
THERMAL [1]			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	208	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	215	°C	ISO 75/Bf

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	210	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	219	°C	ASTM D648
Vicat Softening Temp, Rate B/50	212	°C	ISO 306
Vicat Softening Temp, Rate B/120	209	°C	ISO 306
Vicat Softening Temp, Rate B/50	212	°C	ASTM D1525
Vicat Softening Temp, Rate B/120	209	°C	ASTM D1525
CTE, -40°C to 40°C, flow	1.8E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	4.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, flow	1.8E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	4.5E-05	1/°C	ASTM E831
PHYSICAL (1)			
Density	1.57	g/cm³	ISO 1183
Moisture Absorption, (23°C/50% RH/24hrs)	0.05	%	ISO 62-4
Moisture Absorption, (23°C/50% RH/Equilibrium)	0.1	%	ISO 62-4
Water Absorption, (23°C/saturated)	0.4	%	ISO 62-1
Water Absorption, (23°C/24hrs)	2.1	%	ISO 62-1
Mold Shrinkage, flow (2)	0.2 – 0.7	%	SABIC method
Mold Shrinkage, xflow (2)	0.4 – 0.9	%	SABIC method
Specific Gravity	1.57	-	ASTM D792
Water Absorption, (23°C/Saturated)	0.4	%	ASTM D570
Water Absorption, (23°C/24hrs)	2.1	%	ASTM D570
ELECTRICAL (1)			
Volume Resistivity			
Volume Resistivity	1E+01 – 1E+03	Ω.cm	ANSI/ESD STM11.11
Volume Resistivity (3)	1E+01 – 1E+03	Ω.cm	ASTM D257
Surface Resistivity	1E+04 – 1E+06	Ω	ANSI/ESD STM11.11
Surface Resistivity (3)	1E+04 – 1E+06	Ω	ASTM D257
INJECTION MOLDING (4)			
Maximum Moisture Content	0.15 – 0.25	%	
Drying Temperature	80 – 90	°C	
Drying Time	4 – 6	Hrs	
Melt Temperature	265 – 295	°C	
Nozzle Temperature	260 – 290	°C	
Front - Zone 3 Temperature	265 – 295	°C	
Middle - Zone 2 Temperature	255 – 285	°C	
Rear - Zone 1 Temperature	245 – 275	°C	
Mold Temperature	80 – 100	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw speed (Circumferential speed)	0.15 – 0.25	m/s	

(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) ASTM D257 corresponds with 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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