

LNPTTM STAT-KONTM COMPOUND DD000XI

DESCRIPTION

LNP STAT-KON DD000XI compound is based on Polycarbonate (PC) resin containing conductive carbon powder that has been designed towards ATEX compliant applications. Added features of this grade include: Electrically Conductive, Improved Impact, Hydrolytic Stability.

GENERAL INFORMATION	
Features	Electrically Conductive, Hydrolytic Stability, Impact resistant, No PFAS intentionally added
Fillers	Carbon Powder
Polymer Types	Polycarbonate (PC)
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, 50 mm/min	55	MPa	ISO 527
Tensile Stress, break, 50 mm/min	45	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5	%	ISO 527
Tensile Strain, break, 50 mm/min	10	%	ISO 527
Tensile Modulus, 1 mm/min	2500	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2300	MPa	ISO 178
Tensile Stress, yld, Type I, 50 mm/min	55	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	45	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	12	%	ASTM D638
Tensile Modulus, 50 mm/min	2550	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	90	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2100	MPa	ASTM D790
IMPACT ⁽¹⁾			
Izod Impact, notched 80*10*4 +23°C	10	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	24	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
Izod Impact, notched, 23°C	230	J/m	ASTM D256
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	10	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m ²	ISO 179/1eU

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Multi-Axial Instrumented Impact Total Energy, 23°C	62	J	ISO 6603-2
Multi-Axial Instrumented Impact Energy @ peak, 23°C	60	J	ISO 6603-2
THERMAL ⁽¹⁾			
Vicat Softening Temp, Rate B/50	145	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	139	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	129	°C	ISO 75/Af
Vicat Softening Temp, Rate B/50	145	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	139	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	127	°C	ASTM D648
CTE, -40°C to 40°C, flow	6.30E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.20E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	6.30E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.20E-05	1/°C	ISO 11359-2
Relative Temp Index, Elec ⁽²⁾	80	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽²⁾	130	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽²⁾	130	°C	UL 746B
Temperature Index (TI) ⁽³⁾			
IZOD notched impact , 2 mm	105	°C	SABIC method
PHYSICAL ⁽¹⁾			
Density	1.21	g/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.06 – 0.12	%	ISO 62
Moisture Absorption, (23°C/50% RH/24 hrs)	0.08	%	ASTM D570
Specific Gravity	1.21	-	ASTM D792
Melt Volume Rate, MVR at 300°C/2.16 kg	5	cm ³ /10 min	ISO 1133
Mold Shrinkage, flow ⁽⁴⁾	0.6 – 1.0	%	SABIC method
Mold Shrinkage, xflow ⁽⁴⁾	0.6 – 1.0	%	SABIC method
ELECTRICAL ⁽¹⁾			
Surface Resistivity ⁽⁵⁾	1.E+6 – 1.E+10	Ω	ASTM D257
FLAME CHARACTERISTICS ⁽²⁾			
UL Yellow Card Link	E45329-104468679	-	-
UL Yellow Card Link 2	E207780-104564851	-	-
UL Recognized, 94HB Flame Class Rating	≥0.8	mm	UL 94
UV-light, water exposure/immersion	F1	-	UL 746C
INJECTION MOLDING ⁽⁶⁾			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	0.02	%	
Hopper Temperature	40 – 60	°C	
Melt Temperature	295 – 335	°C	
Rear - Zone 1 Temperature	275 – 315	°C	
Middle - Zone 2 Temperature	285 – 325	°C	
Front - Zone 3 Temperature	295 – 335	°C	
Nozzle Temperature	290 – 330	°C	
Mold Temperature	70 – 95	°C	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	normal	rpm	
Shot to Cylinder Size	30 – 60	%	
Vent Depth	0.025 – 0.076	mm	

- (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) Temperature index reported for this grade is based on internal test protocol, which is similar to IEC 60216 but NOT in full accordance to the standard.
- (4) 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.
- (5) Measurement meets requirements as specified in ASTM D4496.
- (6) 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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