

LNPTM STAT-KONTM COMPOUND DJ000ICX4

DESCRIPTION

LNP STAT-KONTM DJ000ICX4 is a static dissipative compound based on Polycarbonate (PC) and Carbon Nano Tube. Added features of this grade include Electrically Conductive, Improved Processing.

GENERAL INFORMATION	
Features	Electrically Conductive, Good Processability, Heat Stabilized, High Flow, Thin Wall, Low ionics/Outgassing/Liquid particle count, Dimensional stability, Impact resistant, No PFAS intentionally added
Fillers	Carbon nanotube
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding
Regional Availability	Global
INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Mobile Phone - Computer - Tablets, Electrical Devices and Displays, Electrical Components and Infrastructure
Industrial	Semiconductors, Electronic Material Handling, Electronic Material

TYPICAL PROPERTY VALUES

Revision 20240201

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Modulus, 1 mm/min	2400	MPa	ISO 527
Tensile Stress, yield, 50 mm/min	58	MPa	ISO 527
Tensile Stress, break, 50 mm/min	50	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4.9	%	ISO 527
Tensile Nominal Strain, break, 50 mm/min	8.2	%	ISO 527
Flexural Stress, break, 2 mm/min	86	MPa	ISO 178
Flexural Stress at 3.5% strain, 2 mm/min	73	MPa	ISO 178
Flexural Modulus, 2 mm/min	2450	MPa	ISO 178
Flexural Strength, 2 mm/min	91	MPa	ISO 178
Tensile Modulus, 50 mm/min	2400	MPa	ASTM D638
Tensile Stress, yld, Type I, 50 mm/min	60	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	50	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	5.5	%	ASTM D638
Tensile Nominal Strain, brk, Type I, 50 mm/min	7.5	%	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	95	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	84	MPa	ASTM D790
Flexural Stress at 5% strain, 1.3 mm/min, 50 mm span	90	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2550	MPa	ASTM D790
Flexural Strength, 1.3 mm/min, 50 mm span	95	MPa	ASTM D790
IMPACT ⁽¹⁾			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched 80*10*3 +23°C	29	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	3.8	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*3 +23°C	70	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	44	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	17	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	2.2	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	125	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	57	kJ/m ²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	26	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	9.7	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	99	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	68	kJ/m ²	ISO 179/1eU
Multi-Axial Instrumented Impact Total Energy, 23°C	11	J	ISO 6603-2
Multi-Axial Instrumented Impact Total Energy, -30°C	1.6	J	ISO 6603-2
Multi-Axial Instrumented Impact Energy @ peak, 23°C	10	J	ISO 6603-2
Multi-Axial Instrumented Impact Energy @ peak, -30°C	1.4	J	ISO 6603-2
Izod Impact, notched, 23°C	570	J/m	ASTM D256
Izod Impact, notched, -30°C	150	J/m	ASTM D256
Izod Impact, unnotched, 23°C	1710	J/m	ASTM D4812
Izod Impact, unnotched, -30°C	1490	J/m	ASTM D4812
Instrumented Dart Impact Total Energy, 23°C	9.8	J	ASTM D3763
Instrumented Dart Impact Total Energy, -30°C	2.7	J	ASTM D3763
Instrumented Dart Impact Energy @ peak, 23°C	9.1	J	ASTM D3763
Instrumented Dart Impact Energy @ peak, -30°C	2.4	J	ASTM D3763
Instrumented Dart Impact Peak Force, 23°C	7.7	N	ASTM D3763
Instrumented Dart Impact Peak Force, -30°C	3.7	N	ASTM D3763
THERMAL ⁽¹⁾			
Vicat Softening Temp, Rate A/50	147	°C	ISO 306
Vicat Softening Temp, Rate A/120	148	°C	ISO 306
Vicat Softening Temp, Rate B/50	139	°C	ISO 306
Vicat Softening Temp, Rate B/120	140	°C	ISO 306
CTE, -40°C to 40°C, flow	7.0E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.0E-05	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	123	°C	ISO 75 /Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	134	°C	ISO 75 /Bf
Ball Pressure Test, 125°C +/- 2°C	PASS	-	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	147	°C	ASTM D1525
Vicat Softening Temp, Rate A/120	148	°C	ASTM D1525
Vicat Softening Temp, Rate B/50	139	°C	ASTM D1525
Vicat Softening Temp, Rate B/120	140	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	122	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	134	°C	ASTM D648
CTE, -40°C to 40°C, flow	5.5E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.2E-05	1/°C	ASTM E831
PHYSICAL ⁽¹⁾			
Density	1.2	g/cm ³	ISO 1183

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Specific Gravity	1.2	-	ASTM D792
Melt Volume Rate, MVR at 300°C/5.0 kg	48	cm ³ /10 min	ISO 1133
Mold Shrinkage, flow	0.6 – 0.9	%	SABIC method
Mold Shrinkage, xflow	0.7 – 1.0	%	SABIC method
ELECTRICAL ⁽¹⁾			
Surface Resistivity	1E+03 – 1E+06	Ω	ASTM D257
Volume Resistivity	1E+04 – 1E+07	Ω.cm	ASTM D4496
Surface Resistivity, ROA	1E+04 – 1E+07	Ω	IEC 60093
Volume Resistivity	1E+01 – 1E+03	Ω.cm	SABIC method
INJECTION MOLDING ⁽²⁾			
Drying Temperature	110 – 120	°C	
Drying Time	2 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.2	%	
Melt Temperature	300 – 330	°C	
Rear - Zone 1 Temperature	280 – 310	°C	
Middle - Zone 2 Temperature	290 – 320	°C	
Front - Zone 3 Temperature	300 – 330	°C	
Nozzle Temperature	300 – 330	°C	
Mold Temperature	80 – 120	°C	
Back Pressure	0.3 – 0.7	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) 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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