

# LNPT<sup>™</sup> STAT-KON<sup>™</sup> COMPOUND FX22254TR

REGION EUROPE

## DESCRIPTION

LNP STAT-KON FX22254TR compound is based on Polyethylene (PE) resin containing conductive carbon powder and glass fibers. This is a high-performance compound engineered to exhibit a Positive Temperature Coefficient (PTC) effect, allowing for controlled resistance increase with temperature eliminating the need for external thermal regulation. LNP STAT-KON FX22254TR might be considered for automotive heating applications requiring self-regulating thermal behavior, electrical conductivity and mechanical stability. Added features of this grade include: Electrically Conductive, Low CTE, Chemical resistant.

GENERAL INFORMATION	
Features	Conductive, Chemical Resistance, Electrically Conductive, Heat Stabilized, Dimensional stability, Thermally conductive/Electrically isolative
Fillers	Glass Fiber
Polymer Types	Polyethylene, Unspecified (PE, Unspecified)
Processing Techniques	Injection Molding

## TYPICAL PROPERTY VALUES

Revision 20250606

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Modulus, 1 mm/min	7100	MPa	ISO 527
Tensile Stress, break, 5 mm/min	35	MPa	ISO 527
Tensile Strain, break, 5 mm/min	0.9	%	ISO 527
Flexural Modulus, 2 mm/min	7150	MPa	ISO 178
Flexural Strength, 2 mm/min	49	MPa	ISO 178
Tensile Modulus, 5 mm/min	7400	MPa	ASTM D638
Tensile Stress, yld, Type I, 5 mm/min	35	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	35	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	0.8	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1	%	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	6970	MPa	ASTM D790
Flexural Strength, 1.3 mm/min, 50 mm span	47	MPa	ASTM D790
IMPACT			
Izod Impact, notched 80*10*4 +23°C	3	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	6	kJ/m <sup>2</sup>	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	3	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	5	kJ/m <sup>2</sup>	ISO 179/1eU
Izod Impact, notched, 23°C	25	J/m	ASTM D256
Izod Impact, unnotched, 23°C	65	J/m	ASTM D4812
THERMAL			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	110	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	127	°C	ISO 75/Bf
HDT, 1.82 MPa, 3.2mm, unannealed	111	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	128	°C	ASTM D648
Vicat Softening Temp, Rate B/50	97	°C	ISO 306

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Vicat Softening Temp, Rate B/120	100	°C	ISO 306
Vicat Softening Temp, Rate B/50	97	°C	ASTM D1525
Vicat Softening Temp, Rate B/120	100	°C	ASTM D1525
<b>CTE</b>			
CTE, -20°C to 80°C, flow	3.0E-05	1/°C	ISO 11359-2
CTE, -20°C to 80°C, xflow	1.2E-04	1/°C	ISO 11359-2
CTE, -20°C to 80°C, flow	3.0E-05	1/°C	ASTM E831
CTE, -20°C to 80°C, xflow	1.2E-04	1/°C	ASTM E831
Thermal Conductivity	1.7	W/m-°C	ISO 8302
<b>PHYSICAL</b>			
Density	1.43	g/cm³	ISO 1183
Moisture Absorption, (23°C/50% RH/24hrs)	0	%	ISO 62-4
Moisture Absorption, (23°C/50% RH/Equilibrium)	0	%	ISO 62-4
Water Absorption, (23°C/saturated)	0.02	%	ISO 62-1
Water Absorption, (23°C/24hrs)	0.03	%	ISO 62-1
Mold Shrinkage, flow, 24 hrs	0.4 – 0.6	%	ISO 294
Mold Shrinkage, xflow, 24 hrs	0.6 – 0.8	%	ISO 294
<b>Melt Volume Rate</b>			
Melt Volume Rate, MVR at 245°C/10 kg	8.5	cm³/10 min	ISO 1133
Specific Gravity	1.43	-	ASTM D792
Mold Shrinkage, flow, 24 hrs	0.4 – 0.6	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs	0.6 – 0.8	%	ASTM D955
<b>Melt Flow Rate</b>			
Melt Flow Rate, 245°C/10 kgf	8	g/10 min	ASTM D1238
<b>ELECTRICAL</b>			
Surface Resistivity	1E+01 – 1E+03	Ω	ASTM D257
Volume Resistivity	1E+01 – 1E+03	Ω.cm	ASTM D257
Surface Resistivity, ROA	1E+01 – 1E+03	Ω	IEC 60093
<b>ELECTRICAL PROPERTIES</b>			
Volume resistivity	4	Ω.cm	SABIC method
<b>INJECTION MOLDING</b>			
Drying Temperature	80	°C	
Drying Time	2 – 4	Hrs	
Drying Time (Cumulative)	12	Hrs	
Maximum Moisture Content	0.02	%	
Hopper Temperature	23 – 50	°C	
Melt Temperature	235 – 260	°C	
Rear - Zone 1 Temperature	215 – 230	°C	
Middle - Zone 2 Temperature	225 – 250	°C	
Front - Zone 3 Temperature	235 – 260	°C	
Nozzle Temperature	235 – 260	°C	
Mold Temperature	50 – 80	°C	
Back Pressure	0.3 – 1	MPa	
Screw speed (Circumferential speed)	0.15 – 0.25	m/s	

## ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

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