LNP™ THERMOCOMP™ Compound LC00AEX1

PEEK-CF50 — Saudi Basic Industries Corporation (SABIC)

Product Texts

LNP THERMOCOMP LC00AEX1 compound is based on Polyetheretherketone (PEEK) resin containing 50% carbon fiber. Added features of this grade include: Electrically Conductive, Ultra High Modulus and Strength, Easy Molding, Excellent Wear Resistance and Low CTE.

Processing/Physical Characteristics	Value	Unit	Test Standard
ASTM Data			
Mold Shrinkage, MD	**0.15**	mm/mm	ASTM D 955
Mold Shrinkage, TD	**0.25**	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**44000**	MPa	ISO 527
Stress at break	**270**	MPa	ISO 527
Strain at break	**1.4**	%	ISO 527
Flexural modulus	**39100**	MPa	ISO 178
Flexural strength	**404**	MPa	ISO 178
Charpy impact strength, +23°C	**52**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	**6.7**	kJ/m²	ISO 179/1eA
Izod impact strength, +23°C, 4mm	**42.9**	kJ/m²	ISO 180/1U
Izod notched impact strength, +23°C, 4mm	**7.7**	kJ/m²	ISO 180/1A
ASTM Data			
Tensile Modulus	**44000**	MPa	ASTM D 638
Tensile Strength at Break	**251**	MPa	ASTM D 638
Elongation at Break	**1.3**	%	ASTM D 638
Flexural Modulus	**37000**	MPa	ASTM D 790
Izod Impact notched, 1/8 in	**68.1**	J/m	ASTM D 256
Izod Impact unnotched, 1/8 in	**503**	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	**330**	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	**337**	°C	ISO 75-1/-2
ASTM Data			
DTUL @ 66 psi	**338**	°C	ASTM D 648
DTUL @ 264 psi	**329**	°C	ASTM D 648

Electrical properties	Value	Unit	Test Standard
ASTM Data			
Surface Resistivity	**1000000**	Ohm	ASTM D 257
Volume Resistivity	**1000000**	Ohm*cm	ASTM D 257

Other properties	Value	Unit	Test Standard
Humidity absorption	**0.01**	%	Sim. to ISO 62
Density	**1500**	kg/m³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	**120 - 150**	°C	-
Pre-drying - Time	**3 - 5**	h	-
Melt temperature	**380 - 400**	°C	-
Mold temperature	**170 - 200**	°C	-
Zone 1	**290 - 300**	°C	-
Zone 2	**360 - 370**	°C	-
Zone 3	**370 - 380**	°C	-
Screw speed	**50 - 100**	rpm	-

Characteristics

Processing
Injection Molding

Special Characteristics
Increased electrical conductivity

Regional Availability
North America, Europe, Asia Pacific