LNP™ THERMOTUF™ Compound RC006IS

PA66-CF30 — Saudi Basic Industries Corporation (SABIC)

Product Texts

LNP THERMOTUF RC006IS compound is based on Nylon 6/6 resin containing 30% carbon fiber. Added features of this grade include: Electrically Conductive, Impact Modified, Heat Stabilized.

Processing/Physical Characteristics	Value	Unit	Test Standard
ASTM Data			
Mold Shrinkage, MD	**0.003**	mm/mm	ASTM D 955
Mold Shrinkage, TD	**0.0115**	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**23000**	MPa	ISO 527
Stress at break	**230**	MPa	ISO 527
Strain at break	**2.9**	%	ISO 527
Flexural modulus, 23°C	**18100**	MPa	ISO 178
Flexural strength	**340**	MPa	ISO 178
Charpy impact strength, +23°C	**65**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	**9**	kJ/m²	ISO 179/1eA
Izod impact strength, +23°C	**65**	kJ/m²	ISO 180/1U
Izod notched impact strength, +23°C	**11**	kJ/m²	ISO 180/1A
ASTM Data			
Tensile Modulus	**23000**	MPa	ASTM D 638
Tensile Strength at Break	**205**	MPa	ASTM D 638
Elongation at Break	**3.2**	%	ASTM D 638
Flexural Modulus	**15000**	MPa	ASTM D 790
Flexural Strength	**290**	MPa	ASTM D 790
Izod Impact notched, 1/8 in	**99**	J/m	ASTM D 256
Izod Impact unnotched, 1/8 in	**930**	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	**251**	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	**261**	°C	ISO 75-1/-2
Vicat softening temperature, B	**250**	°C	ISO 306
Coeff. of linear therm. expansion, parallel	**40**	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	**67**	E-6/K	ISO 11359-1/-2
ASTM Data			
Coefficient of Thermal Expansion, MD	**60**	E-6/K	ASTM D 696
Coefficient of Thermal Expansion, TD	**76**	E-6/K	ASTM D 696
DTUL @ 66 psi	**261**	°C	ASTM D 648
DTUL @ 264 psi	**251**	°C	ASTM D 648
Vicat Temperature	**249**	°C	ASTM D 1525

Other properties	Value	Unit	Test Standard
Water absorption	**5.5**	%	Sim. to ISO 62
Humidity absorption	**0.9**	%	Sim. to ISO 62
Density	**1240**	kg/m³	ISO 1183
Water Absorption, 24hr	**1.2**	%	ASTM D 570
Density	**1240**	kg/m³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	**80**	°C	-
Pre-drying - Time	**4**	h	-
Processing humidity	**≤0.25**	%	-
Melt temperature	**280 - 305**	°C	-
Mold temperature	**95 - 110**	°C	-
Zone 1	**265 - 275**	°C	-
Zone 2	**280 - 295**	°C	-
Zone 3	**295 - 305**	°C	-

Screw speed	**30 - 60**	rpm	-
Back pressure	**0.2 - 0.3**	MPa	-

Characteristics

Processing
Injection Molding

Special Characteristics
Increased electrical conductivity, High impact or impact modified, Heat stabilized or stable to heat

Applications
Building Construction, IT / Business Machine, Electrical and Electronical, Sports Equipment

Regional Availability
North America, Europe, Asia Pacific, South and Central America