

LNP™ STAT-KON™ Ultem_UC1200 compound

Polyether Imide

SABIC Innovative Plastics

Message:

LNP STAT-KON ULTEM_UC1200 is a 12% carbon fiber reinforced PEI. High modulus with ESD characteristics for high-heat applications.

General Information			
UL YellowCard	E121562-221123		
Filler / Reinforcement	Carbon Fiber,12% Filler by Weight		
Features	ESD Protection		
	High Heat Resistance		
Processing Method	Injection Molding		
Multi-Point Data	Coefficient of Thermal Expansion vs. Temperature (ASTM E831)		
	Flexural DMA (ASTM D4065)		
	Pressure-Volume-Temperature (PVT - Zoller Method)		
	Specific Heat vs. Temperature (ASTM D3417)		
	Tensile Fatigue		
	Tensile Stress vs. Strain (ASTM D638)		
	Thermal Conductivity vs. Temperature (ASTM E1530)		
	Viscosity vs. Shear Rate (ASTM D3835)		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.32	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (337°C/6.6 kg)	7.5	g/10 min	ASTM D1238
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.12 to 0.22	%	
Across Flow : 3.20 mm	0.30 to 0.50	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	8140	MPa	ASTM D638
Tensile Strength ²			ASTM D638
Yield	131	MPa	
Break	131	MPa	
Tensile Elongation ³			ASTM D638
Yield	5.1	%	
Break	5.1	%	
Flexural Modulus			ASTM D790
50.0 mm Span ⁴	7830	MPa	
100 mm Span ⁵	8270	MPa	
Flexural Strength			ASTM D790

Break, 50.0 mm Span ⁶	221	MPa	
Break, 100 mm Span ⁷	193	MPa	
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	37	J/m	ASTM D256
Unnotched Izod Impact (23°C)	420	J/m	ASTM D4812
Instrumented Dart Impact (23°C, Total Energy)	6.21	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 3.20 mm	213	°C	
1.8 MPa, Unannealed, 3.20 mm	209	°C	
1.8 MPa, Unannealed, 6.40 mm	210	°C	
Vicat Softening Temperature	214	°C	ASTM D1525 ⁸
CLTE			ASTM E831
Flow : -40 to 40°C	1.4E-5	cm/cm/°C	
Flow : -20 to 150°C	1.4E-5	cm/cm/°C	
Transverse : -40 to 40°C	3.2E-5	cm/cm/°C	
Transverse : -20 to 150°C	4.0E-5	cm/cm/°C	
RTI Elec	105	°C	UL 746
RTI Imp	105	°C	UL 746
RTI Str	105	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	2.0E+5	ohms	ASTM D257
Volume Resistivity	4.0E+2	ohms · cm	ASTM D257
High Amp Arc Ignition (HAI)	PLC 2		UL 746
Hot-wire Ignition (HWI)	PLC 2		UL 746
Static Decay ⁹	10	msec	FTMS 101B
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.57 mm)	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	149	°C	
Drying Time	4.0 to 6.0	hr	
Drying Time, Maximum	24	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 60	%	
Rear Temperature	360 to 404	°C	
Middle Temperature	371 to 421	°C	
Front Temperature	382 to 427	°C	
Nozzle Temperature	377 to 421	°C	
Processing (Melt) Temp	382 to 427	°C	
Mold Temperature	135 to 163	°C	
Back Pressure	0.345 to 0.689	MPa	

Screw Speed	40 to 70	rpm
Vent Depth	0.025 to 0.076	mm
NOTE		
1.	5.0 mm/min	
2.	Type I, 5.0 mm/min	
3.	Type I, 5.0 mm/min	
4.	1.3 mm/min	
5.	2.6 mm/min	
6.	1.3 mm/min	
7.	2.6 mm/min	
8.	Rate B (120°C/h), Loading 2 (50 N)	
9.	5000V to <50V	

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