LNP™ STAT-LOY™ COMPOUND K3000Z

K-E

DESCRIPTION

LNP STAT-LOY K3000Z compound is based on POM (Acetal) copolymer resin containing proprietary fillers. Added features of this grade include: Permanently Anti-Static.

GENERAL INFORMATION	
Features	Antistatic, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Acetal (POM) Copolymer
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Electronic Components
Industrial	Material Handling

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yield	41	MPa	ASTM D638
Tensile Stress, break	32	MPa	ASTM D638
Tensile Strain, yield	15.8	%	ASTM D638
Tensile Strain, break	59.5	%	ASTM D638
Tensile Modulus, 50 mm/min	1590	MPa	ASTM D638
Flexural Stress	49	MPa	ASTM D790
Flexural Modulus	1440	MPa	ASTM D790
Tensile Stress, yield	41	MPa	ISO 527
Tensile Stress, break	36	MPa	ISO 527
Tensile Strain, yield	13.3	%	ISO 527
Tensile Strain, break	49.2	%	ISO 527
Tensile Modulus, 1 mm/min	1500	MPa	ISO 527
Flexural Stress	40	MPa	ISO 178
Flexural Modulus	1500	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
Izod Impact, notched, 23°C	NB	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	28	J	ASTM D3763
Multiaxial Impact	16	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	15	kJ/m²	ISO 180/1A
THERMAL [1]			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 0.45 MPa, 3.2 mm, unannealed	146	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	67	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.3E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	1.33E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	1.3E-04	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	1.33E-04	1/°C	ISO 11359-2
PHYSICAL (1)			
Density	1.32	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	2.29	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	1.8	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	1.8	%	ASTM D955
Mold Shrinkage, flow, 24 hrs (2)	1.81	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (2)	1.83	%	ISO 294
Wear Factor Washer	14	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.42	-	ASTM D3702 Modified: Manual
Static COF	0.25	-	ASTM D3702 Modified: Manual
Density	1.33	g/cm³	ISO 1183
Melt Volume Rate, MVR at 190°C/10.0 kg	5	cm³/10 min	ISO 1133
Moisture Absorption (23°C / 50% RH)	4.28	%	ISO 62
ELECTRICAL (1)			
Surface Resistivity (3)	1.E+09 – 1.E+11	Ω	ASTM D257
INJECTION MOLDING (4)			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Melt Temperature	195 – 205	°C	
Front - Zone 3 Temperature	200 – 210	°C	
Middle - Zone 2 Temperature	190 – 200	°C	
Rear - Zone 1 Temperature	175 – 190	°C	
Mold Temperature	70 – 95	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	rpm	

(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) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(3) Measurement meets requirements as specified in ASTM D4496.

(4) 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.

DISCLAIMER