

LNPTM STAT-LOY™ COMPOUND A3000U

DESCRIPTION

LNP STAT-LOY A3000U compound is a ABS resin based electrically conductive material with colorability, low surface resistivity, high flow, high gloss and UV stabilization.

GENERAL INFORMATION	
Features	Antistatic, Weatherable/UV stable, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Acrylonitrile Butadiene Styrene (ABS)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Electronic Components

TYPICAL PROPERTY VALUES

Revision 20240716

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, brk, Type I, 50 mm/min	24	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	30.7	%	ASTM D638
Tensile Modulus, 50 mm/min	1514	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	45.4	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	1430	MPa	ASTM D790
Tensile Stress, break, 50 mm/min	23.2	MPa	ISO 527
Tensile Strain, break, 50 mm/min	39.3	%	ISO 527
Tensile Modulus, 1 mm/min	1496	MPa	ISO 527
Flexural Strength, 2 mm/min	42.7	MPa	ISO 178
Flexural Modulus, 2 mm/min	1444	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, notched, 23°C	397	J/m	ASTM D256
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
Izod Impact, notched 80*10*4 +23°C	25.8	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m ²	ISO 180/1U
Charpy			
23°C, V-notch Edgew 80*10*4 sp=62mm	26.1	kJ/m ²	ISO 179/1eA
23°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m ²	ISO 179/1eU
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	85.9	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	72.7	°C	ASTM D648
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	86.3	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	72.4	°C	ISO 75/Af
CTE, -40°C to 40°C, flow	8.9E-5	1/°C	ASTM E831

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, xflow	10.9E-5	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	8.7E-5	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	11.4E-4	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/120	84.3	°C	ASTM D1525
Vicat Softening Temp, Rate B/120	86.4	°C	ISO 306
PHYSICAL ⁽¹⁾			
Specific Gravity	1.06	-	ASTM D792
Melt Flow Rate, 230°C/5 kgf	20.3	g/10 min	ASTM D1238
Moisture Absorption (23°C / 50% RH)	0.22	%	ISO 62
Mold Shrinkage, flow ⁽²⁾	0.6	%	SABIC method
Mold Shrinkage, xflow ⁽²⁾	0.75	%	SABIC method
ELECTRICAL ⁽¹⁾			
Surface Resistivity	1.3E+10	Ω	ASTM D257
Volume Resistivity	4.1E+10	Ω.cm	ASTM D257
Surface Resistivity	3.6E+9	Ω	ANSI/ESD STM11.13
Dielectric Constant, 1.1 GHz	2.96	-	SABIC method
Dissipation Factor, 1.1 GHz	0.03625	-	SABIC method
Dielectric Constant, 1.9 GHz	2.96	-	SABIC method
Dissipation Factor, 1.9 GHz	0.03508	-	SABIC method
Dielectric Constant, 5 GHz	2.87	-	SABIC method
Dissipation Factor, 5 GHz	0.02913	-	SABIC method
Dielectric Constant, 10 GHz	2.86	-	SABIC method
Dissipation Factor, 10 GHz	0.02235	-	SABIC method
Dielectric Constant, 20 GHz	2.69	-	SABIC method
Dissipation Factor, 20 GHz	0.03174	-	SABIC method
INJECTION MOLDING ⁽³⁾			
Drying Temperature	80 – 85	°C	
Drying Time	6 – 8	Hrs	
Melt Temperature	220 – 240	°C	
Nozzle Temperature	220 – 240	°C	
Front - Zone 3 Temperature	220 – 240	°C	
Middle - Zone 2 Temperature	220 – 240	°C	
Rear - Zone 1 Temperature	220 – 240	°C	
Mold Temperature	40 – 60	°C	

- (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) 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.

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