

LNP™ STAT-LOY™ AF3009 compound

Acrylonitrile Butadiene Styrene

SABIC Innovative Plastics

Message:

LNP* Stat-loy* AF3009 is a compound based on Acrylonitrile Butadiene Styrene resin containing Glass Fiber, Flame Retardant. Added features of this material include: Antistat, Flame Retardant.

Also known as: LNP* STAT-LOY* Compound AF-FR

Product reorder name: AF3009

General Information			
Filler / Reinforcement	Glass fiber reinforced material		
Additive	Antistatic property		
Features	Antistatic property		
	Flame retardancy		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.31	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage			
Flow: 24 hours	0.80 - 1.0	%	ASTM D955
Transverse flow: 24 hours	0.90 - 1.1	%	ASTM D955
Vertical flow direction: 24 hours	1.0	%	ISO 294-4
Flow direction: 24 hours	0.93	%	ISO 294-4
Water Absorption (24 hr, 50% RH)	2.0	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	4140	MPa	ASTM D638
--	3620	MPa	ISO 527-2/1
Tensile Strength			
Yield	42.1	MPa	ASTM D638
Yield ²	43.0	MPa	ASTM D638
Yield	43.0	MPa	ISO 527-2, ISO 527-2/5
Fracture	42.1	MPa	ASTM D638
Fracture ³	42.0	MPa	ASTM D638
Fracture	42.0	MPa	ISO 527-2, ISO 527-2/5
Tensile Elongation			
Yield	1.8	%	ASTM D638, ISO 527-2, ISO 527-2/5
Yield ⁴	1.8	%	ASTM D638
Fracture	1.9	%	ASTM D638, ISO 527-2, ISO 527-2/5
Fracture ⁵	2.0	%	ASTM D638

Flexural Modulus			
50.0mm span ⁶	3450	MPa	ASTM D790
--	3450	MPa	ASTM D790
--	3200	MPa	ISO 178
-- ⁷	3200	MPa	ISO 178
Flexural Strength			
--	55.2	MPa	ASTM D790
--	61.0	MPa	ISO 178
--	61.0	MPa	ISO 178
Fracture, 50.0mm span ⁸	59.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	32	J/m	ASTM D256
23°C ⁹	3.5	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	220	J/m	ASTM D4812
23°C ¹⁰	15	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			
23°C, Energy at Peak Load	4.80	J	ASTM D3763
--	1.60	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	96.7	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ¹¹	98.0	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	87.2	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹²	90.0	°C	ISO 75-2/Af
Linear thermal expansion coefficient			
Flow: -40 to 40°C	9.4E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Flow: 23 to 60°C	9.4E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	6.1E-5	cm/cm/°C	ASTM E831
Lateral: -40 to 40°C	6.2E-5	cm/cm/°C	ISO 11359-2
Lateral: 23 to 60°C	6.2E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+10 - 1.0E+12	ohms	ASTM D257
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.50 mm	V-0		UL 94
1.50 mm, Testing by SABIC	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	71.1 - 82.2	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.050 - 0.10	%	

Rear Temperature	182 - 193	°C
Middle Temperature	193 - 204	°C
Front Temperature	204 - 216	°C
Processing (Melt) Temp	199 - 210	°C
Mold Temperature	10.0 - 48.9	°C
Back Pressure	0.172 - 0.344	MPa
Screw Speed	30 - 60	rpm

NOTE

1.	50 mm/min
2.	Type 1, 5.0 mm/min
3.	Type 1, 5.0 mm/min
4.	Type 1, 5.0 mm/min
5.	Type 1, 5.0 mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	80*10*4
10.	80*10*4
11.	80*10*4 mm
12.	80*10*4 mm

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