

LNP™ FARADEx™ AS003 compound

Acrylonitrile Butadiene Styrene

SABIC Innovative Plastics

Message:

LNP* Faradex* AS003 is a compound based on Acrylonitrile Butadiene Styrene resin containing Stainless Steel. Added features of this material include: Electrically Conductive, EMI/RFI Shielding.
Also known as: LNP* FARADEx* Compound AS-1003
Product reorder name: AS003

General Information			
Filler / Reinforcement	Stainless steel fiber		
Features	Conductivity		
	Electromagnetic shielding (EMI)		
	Radio frequency shielding (RFI)		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.16	g/cm ³	ASTM D792
--	1.15	g/cm ³	ISO 1183
Molding Shrinkage			
Flow: 24 hours	0.30	%	ASTM D955
Transverse flow: 24 hours	0.40	%	ASTM D955
Vertical flow direction: 24 hours	0.39	%	ISO 294-4
Flow direction: 24 hours	0.27	%	ISO 294-4
Water Absorption (24 hr, 50% RH)	0.20	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	3160	MPa	ASTM D638
--	2700	MPa	ISO 527-2/1
Tensile Strength			
Yield	42.1	MPa	ASTM D638
Yield	38.0	MPa	ISO 527-2
Fracture	39.3	MPa	ASTM D638
Fracture	37.0	MPa	ISO 527-2
Tensile Elongation			
Yield	2.6	%	ASTM D638
Yield	2.2	%	ISO 527-2
Fracture	6.2	%	ASTM D638
Fracture	2.8	%	ISO 527-2

Flexural Modulus			
--	3050	MPa	ASTM D790
--	2800	MPa	ISO 178
Flexural Strength			
--	75.8	MPa	ASTM D790
--	66.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	53	J/m	ASTM D256
23°C ²	7.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	310	J/m	ASTM D4812
23°C ³	18	kJ/m ²	ISO 180/1U
Instrumented Dart Impact (23°C, Energy at Peak Load)	15.0	J	ASTM D3763
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 ⁴	93.0	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	88.3	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ⁵	78.0	°C	ISO 75-2/Af
Linear thermal expansion coefficient			
Flow: -40 to 40°C	7.7E-5	cm/cm/°C	ASTM E831
Flow: -40 to 40°C	7.1E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	6.3E-5	cm/cm/°C	ASTM E831
Lateral: -40 to 40°C	9.3E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	10 - 1.0E+3	ohms	ASTM D257
Volume Resistivity	1.0E+4	ohms · cm	ASTM D257
Static Decay ⁶	10	msec	FTMS 101B
Shielding Effectiveness (3.00 mm)	50 - 65	dB	Internal method
Injection	Nominal Value	Unit	
Drying Temperature	82.2	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.050 - 0.10	%	
Rear Temperature	210 - 221	°C	
Middle Temperature	232 - 243	°C	
Front Temperature	254 - 266	°C	
Processing (Melt) Temp	238 - 254	°C	
Mold Temperature	71.1 - 93.3	°C	
Back Pressure	0.172 - 0.344	MPa	
Screw Speed	30 - 60	rpm	

NOTE	
1.	50 mm/min
2.	80*10*4
3.	80*10*4
4.	80*10*4 mm
5.	80*10*4 mm
6.	5000V to <50V

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