

LNP™ FARADEX™ MS003 compound

Polypropylene
SABIC Innovative Plastics

Message:

LNP* Faradex* MS003 is a compound based on Polypropylene resin containing Stainless Steel. Added features of this material include: Electrically Conductive, EMI/RFI Shielding.
Also known as: LNP* FARADEX* Compound MS-1003
Product reorder name: MS003

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	1.01	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage			
Flow: 24 hours	1.2	%	ASTM D955
Transverse flow: 24 hours	1.3	%	ASTM D955
Vertical flow direction: 24 hours	1.3	%	ISO 294-4
Flow direction: 24 hours	1.2	%	ISO 294-4
Water Absorption (23°C, 24 hr)	0.030	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	1200	MPa	ASTM D638
--	1300	MPa	ISO 527-2/1
Tensile Strength			
Yield	20.0	MPa	ASTM D638
Yield	21.0	MPa	ISO 527-2
Fracture	15.2	MPa	ASTM D638
Fracture	15.0	MPa	ISO 527-2
Tensile Elongation			
Yield	6.2	%	ASTM D638
Yield	5.2	%	ISO 527-2
Fracture	88	%	ASTM D638
Fracture	72	%	ISO 527-2
Flexural Modulus			
--	1190	MPa	ASTM D790

--	1500	MPa	ISO 178
Flexural Strength			
--	27.6	MPa	ASTM D790
--	32.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	270	J/m	ASTM D256
23°C ²	25	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	1200	J/m	ASTM D4812
23°C ³	80	kJ/m ²	ISO 180/1U
Multi-Axial Instrumented Impact Energy	22.0	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	92.2	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ⁴	95.0	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	53.9	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ⁵	56.0	°C	ISO 75-2/Af
Linear thermal expansion coefficient			
Flow: -40 to 40°C	1.0E-4	cm/cm/°C	ASTM E831
Flow: -40 to 40°C	1.4E-4	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	9.7E-5	cm/cm/°C	ASTM E831
Lateral: -40 to 40°C	1.7E-4	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	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	
Rear Temperature	204 - 216	°C	
Middle Temperature	232 - 243	°C	
Front Temperature	260 - 271	°C	
Processing (Melt) Temp	232 - 249	°C	
Mold Temperature	32.2 - 54.4	°C	
Back Pressure	0.172 - 0.344	MPa	
Screw Speed	25 - 50	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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