LNP™ FARADEX™ COMPOUND MS003

MS-1003

DESCRIPTION

LNP* FARADEX* MS003 is a compound based on Polypropylene resin containing 15% Stainless Steel. Added features of this material include: Electrically Conductive, EMI/RFI Shielding.

TYPICAL PROPERTY VALUES

Revision 20200210

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yield	19	MPa	ASTM D 638
Tensile Stress, break	15	MPa	ASTM D 638
Tensile Strain, yield	6.2	%	ASTM D 638
Tensile Strain, break	88.4	%	ASTM D 638
Tensile Modulus, 50 mm/min	1190	MPa	ASTM D 638
Flexural Stress	27	MPa	ASTM D 790
Flexural Modulus	1190	MPa	ASTM D 790
Tensile Stress, yield	21	MPa	ISO 527
Tensile Stress, break	15	MPa	ISO 527
Tensile Strain, yield	5.2	%	ISO 527
Tensile Strain, break	72	%	ISO 527
Tensile Modulus, 1 mm/min	1300	MPa	ISO 527
Flexural Stress	32	MPa	ISO 178
Flexural Modulus	1500	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	1226	J/m	ASTM D 4812
Izod Impact, notched, 23°C	267	J/m	ASTM D 256
Multiaxial Impact	22	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	80	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	25	kJ/m²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	92	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	53	°C	ASTM D 648
CTE, -40°C to 40°C, flow	1.04E-04	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	9.72E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	1.43E-04	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	1.7E-04	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	95	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	56	°C	ISO 75/Af
PHYSICAL			
Density	1.01	g/cm³	ASTM D 792
Mold Shrinkage, flow, 24 hrs	120	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	130	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs	1.2	%	ISO 294

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Mold Shrinkage, xflow, 24 hrs	1.3	%	ISO 294
Density	1.01	g/cm³	ISO 1183
Water Absorption, 23°C/24hrs	0.03	%	ISO 62-1
ELECTRICAL			
Volume Resistivity	1.E+04	Ohm-cm	ASTM D 257
Surface Resistivity	1.E+03	Ohm	ASTM D 257
Static Decay, 5000V to <50V	0.01	< seconds	FTMS101B
Shielding Effectivness @ 3mm	50 – 65	dB	SABIC method
INJECTION MOLDING			
Drying Temperature	80	°C	
Drying Time	4	hrs	
Melt Temperature	230 – 250	°C	
Front - Zone 3 Temperature	260 – 270	°C	
Middle - Zone 2 Temperature	230 – 245	°C	
Rear - Zone 1 Temperature	205 – 215	°C	
Mold Temperature	30 – 55	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	25 – 50	rpm	

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