LNP™ FARADEX™ COMPOUND MS003

MS-1003

DESCRIPTION

LNP FARADEX MS003 compound is based on Polypropylene (PP) resin containing 15% stainless steel fiber. Added features of this grade include: Electrically Conductive, EMI/RFI shielding.

GENERAL INFORMATION	
Features	Electrically Conductive, EMI/RFI Shielding, No PFAS intentionally added
Fillers	Stainless Steel Fiber
Polymer Types	Polypropylene, Unspecified (PP, Unspecified)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Consumer	Commercial Appliance
Electrical and Electronics	Electronic Components
Industrial	Electrical, Material Handling
Packaging	Industrial Packaging

TYPICAL PROPERTY VALUES

Revision 20241025

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yield	19	MPa	ASTM D638
Tensile Stress, break	15	MPa	ASTM D638
Tensile Strain, yield	6.2	%	ASTM D638
Tensile Strain, break	88.4	%	ASTM D638
Tensile Modulus, 50 mm/min	1190	MPa	ASTM D638
Flexural Stress	27	MPa	ASTM D790
Flexural Modulus	1190	MPa	ASTM D790
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 [1]			
Izod Impact, unnotched, 23°C	1226	J/m	ASTM D4812
Izod Impact, notched, 23°C	267	J/m	ASTM D256
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

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	92	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	53	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.04E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	9.72E-05	1/°C	ASTM E831
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 [1]			
Density	1.01	g/cm³	ASTM D792
Mold Shrinkage, flow, 24 hrs [2]	1.2	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	1.3	%	ASTM D955
Mold Shrinkage, flow, 24 hrs [2]	1.2	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [2]	1.3	%	ISO 294
Density	1.01	g/cm³	ISO 1183
Water Absorption, (23°C/24hrs)	0.03	%	ISO 62-1
ELECTRICAL [1]			
Volume Resistivity [3]	1.E+04	Ω.cm	ASTM D257
Surface Resistivity [3]	1.E+03	Ω	ASTM D257
Static Decay, 5000V to <50V	<0.01	Seconds	FTMS101B
Shielding Effectivness @ 3mm	50 – 65	dB	SABIC method
INJECTION MOLDING [4]			
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	

(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) Measurement meets requirements as specified in ASTM D4496.

(4) 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.

DISCLAIMER