LNP™ FARADEX™ COMPOUND NS003

PCA-S-1003

DESCRIPTION

LNP FARADEX NS003 compound is based on Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) blend 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	Polycarbonate + ABS (PC+ABS)
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	50	MPa	ISO 527
Tensile Stress, break	46	MPa	ISO 527
Tensile Strain, yield	3.5	%	ISO 527
Tensile Strain, break	6	%	ISO 527
Tensile Modulus, 1 mm/min	2700	MPa	ISO 527
Flexural Stress	86	MPa	ISO 178
Flexural Modulus	2800	MPa	ISO 178
Tensile Stress, yield	52	MPa	ASTM D638
Tensile Stress, break	49	MPa	ASTM D638
Tensile Strain, yield	3.3	%	ASTM D638
Tensile Strain, break	4.7	%	ASTM D638
Tensile Modulus, 50 mm/min	3100	MPa	ASTM D638
Flexural Stress	89	MPa	ASTM D790
Flexural Modulus	2990	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	9	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	32	kJ/m²	ISO 180/1U
Izod Impact, notched, 23°C	74	J/m	ASTM D256
Izod Impact, unnotched, 23°C	573	J/m	ASTM D4812
Instrumented Dart Impact Energy @ peak, 23°C	15	J	ASTM D3763

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
THERMAL [1]			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	103	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	115	°C	ISO 75/Bf
CTE, -40°C to 40°C, flow	5.90E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.20E-05	1/°C	ISO 11359-2
HDT, 0.45 MPa, 3.2 mm, unannealed	120	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	105	°C	ASTM D648
CTE, -40°C to 40°C, flow	6.30E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.74E-05	1/°C	ASTM E831
PHYSICAL [1]			
Density	1.21	g/cm³	ISO 1183
Mold Shrinkage, flow, 24 hrs [2]	0.3	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [2]	0.35	%	ISO 294
Density	1.24	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.1	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	0.35	%	ASTM D955
ELECTRICAL [1]			
Volume Resistivity [3]	1.E+04	Ω.cm	ASTM D257
Surface Resistivity [3]	1.E+01 – 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	
Maximum Moisture Content	0.02	%	
Melt Temperature	220 – 260	°C	
Front - Zone 3 Temperature	245 – 255	°C	
Middle - Zone 2 Temperature	230 – 245	°C	
Rear - Zone 1 Temperature	220 – 230	°C	
Mold Temperature	40 – 80	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	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

CHEMISTRY THAT MATTERS™