LNP™ FARADEX™ COMPOUND NS0031

DESCRIPTION

LNP FARADEX NS0031 compound is based on Polycarbonate / Acrylonitrile Butadiene Styrene (PC/ABS) blend containing 15% stainless steel fiber. Added features of this grade include: EMI/RFI shielding, Electrically Conductive, Non-Brominated and Non-Chlorinated Flame Retardant.

GENERAL INFORMATION	
Features	Flame Retardant, Electrically Conductive, EMI/RFI Shielding, Non Cl/Br flame retardant
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 20260429

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	61	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	57	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	3.4	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	3.7	%	ASTM D638
Tensile Modulus, 5 mm/min	3120	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	95	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2970	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	59	MPa	ISO 527
Tensile Stress, break, 5 mm/min	55	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3.2	%	ISO 527
Tensile Strain, break, 5 mm/min	4.4	%	ISO 527
Tensile Modulus, 1 mm/min	3000	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	102	MPa	ISO 178
Flexural Modulus, 2 mm/min	3090	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	686	J/m	ASTM D4812
Izod Impact, unnotched, -30°C	588	J/m	ASTM D4812
Izod Impact, notched, 23°C	55	J/m	ASTM D256
Izod Impact, notched, -30°C	43	J/m	ASTM D256
Multiaxial Impact	7	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	39	kJ/m²	ISO 180/1U

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, unnotched 80*10*4 -30°C	39	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	5	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	4	kJ/m²	ISO 179/1eA
THERMAL [1]			
Vicat Softening Temp, Rate B/50	109	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	96	°C	ASTM D648
CTE, -40°C to 40°C, flow	5.7E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.6E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	5.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.4E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	109	°C	ISO 306
Vicat Softening Temp, Rate B/120	112	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	98	°C	ISO 75/Af
Relative Temp Index, Mech w/impact [2]	85	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	85	°C	UL 746B
PHYSICAL [1]			
Specific Gravity	1.33	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm [3]	0.59	%	SABIC method
Melt Flow Rate			
280°C/5.0 kgf	12.3	g/10 min	ASTM D1238
Density	1.33	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.2	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.1	%	ISO 62
Melt Volume Rate			
265°C/10.0 kg	31	cm³/10 min	ISO 1133
ELECTRICAL [1]			
Volume Resistivity [4]	1.E+07	Ω.cm	ASTM D257
Surface Resistivity [4]	1.E+05	Ω	ASTM D257
Static Decay, 5000V to <50V	<0.01	Seconds	FTMS101B
Shielding Effectivness @ 3mm	47	dB	SABIC method
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E207780-101282733	-	-
UL Recognized, 94-5VB Flame Class Rating	≥2	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING [5]			
Drying Temperature	85 – 90	°C	
Drying Time	3 – 4	Hrs	
Maximum Moisture Content	0.04	%	
Melt Temperature	270 – 300	°C	
Nozzle Temperature	265 – 300	°C	
Front - Zone 3 Temperature	265 – 300	°C	
Middle - Zone 2 Temperature	260 – 300	°C	
Rear - Zone 1 Temperature	260 – 300	°C	
Mold Temperature	60 – 90	°C	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Back Pressure	4	MPa	
Screw Speed	30 – 100	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) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.
(3) 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.
(4) Measurement meets requirements as specified in ASTM D4496.
(5) 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.

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