

SABIC Innovative Plastics LNP FARADEx MS003 PP

Category : Polymer , Thermoplastic , Polypropylene (PP)

Material Notes:

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.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-FARADEx-MS003-PP.php

Physical Properties	Metric	English	Comments
Density	1.01 g/cc	0.0365 lb/in ³	ASTM D792
	1.01 g/cc	0.0365 lb/in ³	ISO 1183
Linear Mold Shrinkage, Flow	0.012 cm/cm	0.012 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.013 cm/cm	0.013 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	15.0 MPa	2180 psi	ASTM D638
	15.0 MPa	2180 psi	ISO 527
Tensile Strength, Yield	19.0 MPa	2760 psi	ASTM D638
	21.0 MPa	3050 psi	ISO 527
Elongation at Break	72 %	72 %	ISO 527
	88.4 %	88.4 %	ASTM D638
Elongation at Yield	5.2 %	5.2 %	ISO 527
	6.2 %	6.2 %	ASTM D638
Tensile Modulus	1.19 GPa	173 ksi	50 mm/min; ASTM D638
	1.30 GPa	189 ksi	1 mm/min; ISO 527
Flexural Strength	27.0 MPa	3920 psi	ASTM D790
	32.0 MPa	4640 psi	ISO 178
Flexural Modulus	1.19 GPa	173 ksi	ASTM D790
	1.50 GPa	218 ksi	ISO 178

Mechanical Properties	Metric ^{lb/cm}	English ^{lb/in}	Comments
Izod Impact, Unnotched	12.26 J/cm	22.97 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	25.0 kJ/m ²	11.9 ft-lb/in ²	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	80.0 kJ/m ²	38.1 ft-lb/in ²	80*10*4; ISO 180/1U
Impact Test	22.0 J	16.2 ft-lb	Multiaxial Impact; ISO 6603

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	104 µm/m-°C	57.8 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	143 µm/m-°C	79.4 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	97.2 µm/m-°C	54.0 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	170 µm/m-°C	94.4 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Deflection Temperature at 0.46 MPa (66 psi)	95.0 °C	203 °F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	92.0 °C	198 °F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	56.0 °C	133 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	53.0 °C	127 °F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648

Electrical Properties	Metric	English	Comments
Volume Resistivity	10000 ohm-cm	10000 ohm-cm	ASTM D257
Surface Resistance	1000 ohm	1000 ohm	ASTM D257
Shielding Effectiveness	50 - 65 dB	50 - 65 dB	SABIC Method
	@Thickness 3.00 mm	@Thickness 0.118 in	

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