

LNP™ FARADEX™ ES003E compound

Polyether Imide
SABIC Innovative Plastics

Message:

LNP FARADEX ES003E is a Polyetherimide resin containing 15% Stainless Steel Fibers. Added feature of this grade is: EMI/RFI Shielding.
Also known as: LNP* FARADEX* Compound EMI-X ES-1003 EM
Product reorder name: ES003E

General Information			
Filler / Reinforcement	Stainless Steel Fiber,15% Filler by Weight		
Features	Electromagnetic Shielding (EMI)		
	Radio Frequency Shielding (RFI)		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.46	g/cm ³	ASTM D792
Molding Shrinkage			ASTM D955
Flow : 24 hr	0.60 to 0.80	%	
Across Flow : 24 hr	0.80 to 1.0	%	
Water Absorption			
24 hr, 50% RH	0.19	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.27	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	4660	MPa	ASTM D638
--	4350	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	105	MPa	ASTM D638
Yield	99.0	MPa	ISO 527-2/5
Break ³	105	MPa	ASTM D638
Break	98.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	4.8	%	ASTM D638
Yield	4.1	%	ISO 527-2/5
Break ⁵	5.0	%	ASTM D638
Break	4.4	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁶	4590	MPa	ASTM D790
-- ⁷	4310	MPa	ISO 178
Flexural Stress	155	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			

23°C	34	J/m	ASTM D256
23°C ⁸	5.6	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	490	J/m	ASTM D4812
23°C ⁹	34	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			
23°C, Total Energy	7.60	J	ASTM D3763
--	1.30	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	190	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ¹⁰	194	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	180	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹¹	177	°C	ISO 75-2/Af
CLTE			ASTM D696
Flow : -30 to 30°C	4.0E-5	cm/cm/°C	
Transverse : -30 to 30°C	4.4E-5	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	2.0 to 4.0	ohms	ASTM D257
Shielding Effectiveness (2.50 mm)	60	dB	Internal Method
NOTE			
1.	50 mm/min		
2.	Type I, 5.0 mm/min		
3.	Type I, 5.0 mm/min		
4.	Type I, 5.0 mm/min		
5.	Type I, 5.0 mm/min		
6.	1.3 mm/min		
7.	2.0 mm/min		
8.	80*10*4		
9.	80*10*4		
10.	80*10*4 mm		
11.	80*10*4 mm		

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