

LNP™ FARADEx™ DS0036I compound

Polycarbonate

SABIC Innovative Plastics

Message:

LNP* Faradex* DS0036I is a compound based on Polycarbonate resin containing Flame Retardant, Stainless Steel Fiber. Added features of this material include: High Impact, Flame Retardant, Non-Brominated & Non-Chlorinated Flame Retardant, EMI/RFI Shielding.

Also known as: LNP* FARADEx* Compound DS1003FRHIS

Product reorder name: DS0036I

General Information			
Filler / Reinforcement	Stainless steel fiber		
Additive	Flame retardancy		
Features	Chlorine Free		
	Electromagnetic shielding (EMI)		
	Impact resistance, high		
	Radio frequency shielding (RFI)		
	Bromine-free		
	Flame retardancy		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.29	g/cm³	ISO 1183
Molding Shrinkage			
Flow ¹	0.40 - 0.70	%	Internal method
Vertical flow direction: 24 hours	0.40 - 0.60	%	ISO 294-4
Water Absorption (23°C, 24 hr)	0.13	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ²	2560	MPa	ASTM D638
--	2500	MPa	ISO 527-2/1
Tensile Strength			
Yield ³	59.0	MPa	ASTM D638
Yield	57.0	MPa	ISO 527-2/5
Fracture ⁴	53.0	MPa	ASTM D638
Fracture	55.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁵	4.3	%	ASTM D638
Yield	3.8	%	ISO 527-2/5
Fracture ⁶	5.1	%	ASTM D638
Fracture	4.0 - 8.0	%	ISO 527-2/5

Flexural Modulus ⁷	2600	MPa	ISO 178
Flexural Stress	80.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	130	J/m	ASTM D256
23°C ⁸	10	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	1800	J/m	ASTM D4812
23°C ⁹	70	kJ/m ²	ISO 180/1U
Multi-Axial Instrumented Impact Energy	29.0	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ¹⁰			
0.45 MPa, unannealed, 64.0mm span	136	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 64.0mm span	125	°C	ISO 75-2/Af
Linear thermal expansion coefficient			ISO 11359-2
Flow: 23 to 60°C	5.7E-5	cm/cm/°C	ISO 11359-2
Lateral: 23 to 60°C	6.8E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+2 - 1.0E+4	ohms	ASTM D257
Volume Resistivity	1.0E+4 - 1.0E+6	ohms·cm	ASTM D257
Static Decay ¹¹	10	msec	FTMS 101B
Shielding Effectiveness (3.00 mm)	40 - 55	dB	Internal method
Flammability	Nominal Value	Unit	Test Method
Flame Rating (2.00 mm)	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.020	%	
Rear Temperature	293 - 304	°C	
Middle Temperature	310 - 321	°C	
Front Temperature	321 - 332	°C	
Processing (Melt) Temp	304 - 327	°C	
Mold Temperature	93.3 - 121	°C	
Back Pressure	0.172 - 0.344	MPa	
Screw Speed	30 - 60	rpm	
NOTE			
1.	Tensile Bar		
2.	5.0 mm/min		
3.	Type 1, 5.0 mm/min		
4.	Type 1, 5.0 mm/min		
5.	Type 1, 5.0 mm/min		
6.	Type 1, 5.0 mm/min		

7.	2.0 mm/min
8.	80*10*4
9.	80*10*4
10.	80*10*4 mm
11.	5000V to <50V

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