

LNPT[™] FARADEx[™] COMPOUND DS0036I

DS-1003 FR HI
REGION EUROPE

DESCRIPTION

LNP FARADEx DS0036I compound is based on Polycarbonate (PC) resin containing 15% stainless steel fiber. Added features of this grade include: Electrically Conductive, EMI/RFI shielding, High Impact, Non-Brominated & Non-Chlorinated Flame Retardant.

GENERAL INFORMATION

Features	Flame Retardant, Electrically Conductive, EMI/RFI Shielding, Non Cl/Br flame retardant, Impact resistant
Fillers	Stainless Steel Fiber
Polymer Types	Polycarbonate (PC)
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 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yld, Type I, 5 mm/min	59	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	53	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	4.3	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	5.1	%	ASTM D638
Tensile Modulus, 5 mm/min	2550	MPa	ASTM D638
Tensile Stress, yield, 5 mm/min	57	MPa	ISO 527
Tensile Stress, break, 5 mm/min	55	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3.8	%	ISO 527
Tensile Strain, break, 5 mm/min	4 – 8	%	ISO 527
Tensile Modulus, 1 mm/min	2800	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	80	MPa	ISO 178
Flexural Modulus, 2 mm/min	2600	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, unnotched, 23°C	1790	J/m	ASTM D4812
Izod Impact, notched, 23°C	124	J/m	ASTM D256
Izod Impact, notched, -40°C	80	J/m	ASTM D256
Multiaxial Impact	29	J	ISO 6603
Izod Impact, unnotched 80°10°4 +23°C	85	kJ/m ²	ISO 180/1U
Izod Impact, notched 80°10°4 +23°C	14	kJ/m ²	ISO 180/1A

© 2023 Copyright by SABIC. All rights reserved

CHEMISTRY THAT MATTERS[™]

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched 80*10*4 -40°C	11	kJ/m ²	ISO 180/1A
THERMAL ⁽¹⁾			
CTE, 23°C to 60°C, flow	5.7E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	6.8E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	136	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	125	°C	ISO 75/Af
Relative Temp Index, Elec ⁽²⁾	80	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽²⁾	110	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽²⁾	115	°C	UL 746B
PHYSICAL ⁽¹⁾			
Mold Shrinkage on Tensile Bar, flow ⁽³⁾	0.4 – 0.7	%	SABIC method
Mold Shrinkage, xflow, 24 hrs ⁽³⁾	0.4 – 0.6	%	ISO 294
Density	1.29	g/cm ³	ISO 1183
Water Absorption, (23°C/24hrs)	0.13	%	ISO 62-1
ELECTRICAL ⁽¹⁾			
Volume Resistivity ⁽⁴⁾	1.E+04 – 1.E+06	Ω.cm	ASTM D257
Surface Resistivity ⁽⁴⁾	1.E+02 – 1.E+04	Ω	ASTM D257
Static Decay, 5000V to <50V	<0.01	Seconds	FTMS101B
Shielding Effectiveness @ 3mm	40 – 55	dB	SABIC method
FLAME CHARACTERISTICS ⁽²⁾			
UL Yellow Card Link	E45329-101343783	-	-
UL Yellow Card Link 2	E45329-101343784	-	-
UL Recognized, 94-5VA Flame Class Rating	≥3	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	≥2	mm	UL 94
UL Recognized, 94V-1 Flame Class Rating	≥1.6	mm	UL 94
UV-light, water exposure/immersion	F1	-	UL 746C
INJECTION MOLDING ⁽⁵⁾			
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	305 – 325	°C	
Front - Zone 3 Temperature	320 – 330	°C	
Middle - Zone 2 Temperature	310 – 320	°C	
Rear - Zone 1 Temperature	295 – 305	°C	
Mold Temperature	95 – 120	°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) 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.



DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.