

LEXAN™ EXL FILAMENT AMHI240F

DESCRIPTION

LEXAN™ EXL AMHI240F filament is a high impact polycarbonate product available in black and white colors. It provides high impact strength and improved ductility over standard polycarbonate at room temperature and extreme low temperatures.

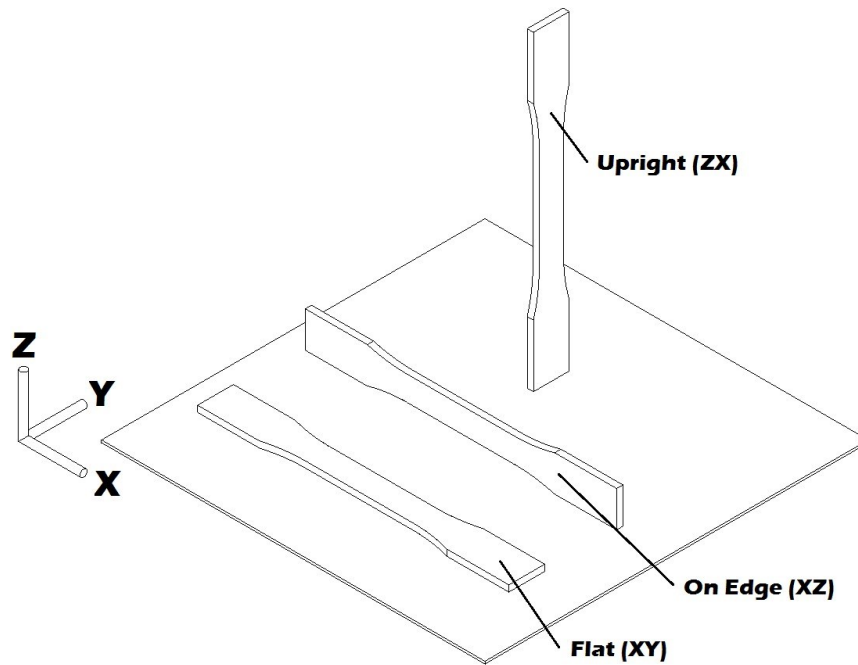
TYPICAL PROPERTY VALUES

Revision 20190711

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Modulus			
XY ORIENTATION	1730	MPa	ASTM D638
XZ ORIENTATION	1910	MPa	ASTM D638
ZX ORIENTATION	1800	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min			
XY ORIENTATION	45	MPa	ASTM D638
XZ ORIENTATION	55	MPa	ASTM D638
ZX ORIENTATION	40	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min			
XY ORIENTATION	7	%	ASTM D638
XZ ORIENTATION	5	%	ASTM D638
ZX ORIENTATION	3	%	ASTM D638
Flexural Modulus, 1.3 mm/min			
XY ORIENTATION	1530	MPa	ASTM D 790
XZ ORIENTATION	1910	MPa	ASTM D 790
ZX ORIENTATION	1500	MPa	ASTM D 790
Izod Impact, notched, 23°C			
XY ORIENTATION	205	J/m	ASTM D 256
XZ ORIENTATION	320	J/m	ASTM D 256
ZX ORIENTATION	55	J/m	ASTM D 256
Izod Impact, notched, -30°C			
XY ORIENTATION	170	J/m	ASTM D 256
XZ ORIENTATION	230	J/m	ASTM D 256
ZX ORIENTATION	40	J/m	ASTM D 256
Izod Impact, un-notched, 23°C			
XY ORIENTATION	855	J/m	ASTM D 256
XZ ORIENTATION	880	J/m	ASTM D 256
ZX ORIENTATION	250	J/m	ASTM D 256
Izod Impact, un-notched, -30°C			
XY ORIENTATION	1000	J/m	ASTM D 256
XZ ORIENTATION	940	J/m	ASTM D 256
ZX ORIENTATION	260	J/m	ASTM D 256
Instrumented Impact Total Energy, 23 °C			
XY ORIENTATION	14	J	ASTM D 3763
XZ/ZX ORIENTATION	17	J	ASTM D 3763

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Instrumented Impact Total Energy, -30 °C			
XY ORIENTATION	13	J	ASTM D 3763
XZ/ZX ORIENTATION	10	J	ASTM D 3763
THERMAL			
HDT, 1.82 MPa, 3.2 mm, unannealed			
XY ORIENTATION	139	°C	ASTM D648
XZ ORIENTATION	138	°C	ASTM D648
ZX ORIENTATION	138	°C	ASTM D648
Vicat Softening Temp, Rate A/50			
XY ORIENTATION	148	°C	ASTM D1525
XZ ORIENTATION	149	°C	ASTM D1525
ZX ORIENTATION	149	°C	ASTM D 1525
Coefficient of Thermal Expansion - flow			
XY ORIENTATION	77	µm/(m-°C)	ASTM E 831
XZ ORIENTATION	80	µm/(m-°C)	ASTM E 831
ZX ORIENTATION	79	µm/(m-°C)	ASTM E 831
Coefficient of Thermal Expansion - x-flow			
XY ORIENTATION	77	µm/(m-°C)	ASTM E 831
XZ ORIENTATION	81	µm/(m-°C)	ASTM E 831
ZX ORIENTATION	79	µm/(m-°C)	ASTM E 831
PHYSICAL			
Density	1.19	g/cm ³	ASTM D 792
ELECTRICAL			
Volume Resistivity			
XY ORIENTATION	1.4E+15	Ω.cm	ASTM D 257
XZ/ZX ORIENTATION	1.5E+15	Ω.cm	ASTM D 257
Dielectric Constant			
XY ORIENTATION at 1.9 GHz	2.6	-	ASTM D 150
XZ/ZX ORIENTATION at 1.9 GHz	2.7	-	ASTM D 150
Dissipation Factor			
XY ORIENTATION at 1.9 GHz	0.005	-	ASTM D 150
XZ/ZX ORIENTATION at 1.9 GHz	0.005	-	ASTM D 150
FLAME CHARACTERISTICS			
UL94 Flame Class Rating ⁽¹⁾			
XY ORIENTATION, 3.0 mm (Black)	V-0	-	UL 94
XZ ORIENTATION, 3.0 mm (Black)	V-0	-	UL 94
ZX ORIENTATION, 3.0 mm (Black)	V-2	-	UL 94
XY ORIENTATION, 3.0 mm (White)	V-2	-	UL 94
XZ ORIENTATION, 3.0 mm (White)	V-2	-	UL 94
ZX ORIENTATION, 3.0 mm (White)	V-2	-	UL 94

(1) UL results provided herein may not be sufficient to waive end use part testing for UL listing. Contact UL for further details.



DISCLAIMER

Typical values only. Not intended for design or specification purposes. Variations within normal tolerances are possible for various colors. Test coupons were printed using a Stratasys® FORTUS® 900mc printer under standard parameters unless otherwise noted.

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