

LEXAN™ FXE1414L resin

Tuesday, March 10, 2015

General Information

Product Description

Opaque EXL, UV-Stabilized & light shielding capability (Wall thickness >0.8mm), for portable electronics device enclosure application. Only available in white, grey and limited pastel colors. Consult CIC or PM for color availability & limitation.

General

Material Status	• Commercial: Active	
Availability	• Asia Pacific	
Additive	• UV Stabilizer	
Uses	• Electrical Housing	
Appearance	• Colors Available • Grey	• Opaque • White
Processing Method	• Injection Molding	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.28		ASTM D792
Density	1.28	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	11	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	0.610	in ³ /10min	ISO 1133
Molding Shrinkage - Flow (0.126 in)	4.0E-3 to 8.0E-3	in/in	Internal Method
Water Absorption (Saturation, 73°F)	0.17	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.070	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ²	295000	psi	ASTM D638
Tensile Modulus	291000	psi	ISO 527-2/1
Tensile Strength ³ (Yield)	7540	psi	ASTM D638
Tensile Stress (Yield)	7540	psi	ISO 527-2/50
Tensile Strength ³ (Break)	7830	psi	ASTM D638
Tensile Stress (Break)	6820	psi	ISO 527-2/50
Tensile Elongation ³ (Yield)	5.0	%	ASTM D638
Tensile Strain (Yield)	5.0	%	ISO 527-2/50
Tensile Elongation ³ (Break)	84	%	ASTM D638
Tensile Strain (Break)	75	%	ISO 527-2/50
Flexural Modulus ⁴ (1.97 in Span)	297000	psi	ASTM D790
Flexural Modulus ⁵	307000	psi	ISO 178
Flexural Stress ^{5, 6}	12000	psi	ISO 178
Flexural Strength ⁴ (Yield, 1.97 in Span)	12500	psi	ASTM D790

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Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁷ (73°F)	26	ft-lb/in ²	ISO 179/1eA
Notched Izod Impact			ASTM D256
-22°F	12	ft-lb/in	
73°F	14	ft-lb/in	
Notched Izod Impact Strength ⁸			ISO 180/1A
-22°F	22	ft-lb/in ²	
73°F	27	ft-lb/in ²	
Instrumented Dart Impact (73°F, Total Energy)	602	in-lb	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed, 0.126 in	250	°F	
Heat Deflection Temperature ⁹			ISO 75-2/Af
264 psi, Unannealed, 2.52 in Span	244	°F	
Vicat Softening Temperature	280	°F	ASTM D1525 ¹⁰
Vicat Softening Temperature			
--	280	°F	ISO 306/B50
--	295	°F	ISO 306/B120
CLTE - Flow (-40 to 104°F)	3.9E-5	in/in/°F	ASTM E831
CLTE - Flow (-40 to 104°F)	3.9E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (-40 to 104°F)	3.7E-5	in/in/°F	ASTM E831
CLTE - Transverse (-40 to 104°F)	4.6E-5	in/in/°F	ISO 11359-2
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.0157 in)	HB		UL 94

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	248	°F
Drying Time	3.0 to 4.0	hr
Suggested Max Moisture	0.020	%
Hopper Temperature	140 to 176	°F
Rear Temperature	500 to 536	°F
Middle Temperature	536 to 581	°F
Front Temperature	563 to 599	°F
Nozzle Temperature	554 to 590	°F
Processing (Melt) Temp	563 to 599	°F
Mold Temperature	158 to 203	°F

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Notes

¹ Typical properties: these are not to be construed as specifications.
² 2.0 in/min
³ Type I, 2.0 in/min
⁴ 0.051 in/min
⁵ 0.079 in/min
⁶ Yield
⁷ 80*10*4 sp=62mm
⁸ 80*10*4
⁹ 80*10*4 mm
¹⁰ Rate B (120°C/h), Loading 2 (50 N)

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