

Elexar® EL-8614A (PRELIMINARY DATA)

Thermoplastic Elastomer

Teknor Apex Company

Message:

Elexar EL-8614A is a high performance thermoplastic elastomer designed for electrical applications requiring flexibility over a wide temperature range. Elexar EL-8614A is a RoHS compliant, flame retardant grade suitable for both injection molding and extrusion.

General Information	
Features	High specific gravity
	High density
	Workability, good
	Good formability
	Good coloring
	Good adhesion
	Low liquidity
	Halogenated
	Good chemical resistance
	Good toughness
	Fill
	High hardness
	Flame retardancy
Uses	Underground cable
	Cable sheath
	Electrical wire sheath material
	Electrical conductor insulation material
	Wire and cable applications
	Wire sheath
	Industrial cable insulation material
	Connector
	cord sheath
	Terminal cable sheath material
RoHS Compliance	RoHS compliance
Appearance	Opacity
	Available colors
Forms	Particle
Processing Method	Extrusion
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.16	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	4.0	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shaw D, 1 sec	60		ASTM D2240
Shaw D, 5 seconds	58		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
100% strain	7.45	MPa	ASTM D412
300% strain	8.41	MPa	ASTM D412
Tensile Strength (Yield)	21.0	MPa	ASTM D412
Tensile Elongation (Break)	620	%	ASTM D412
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (136°C, 168 hr)	-26	%	ASTM D573
Change in Ultimate Elongation in Air (136°C, 168 hr)	-26	%	ASTM D573
Change in Tensile Strength (60°C, 168 hr, in IRM 902 Oil)	-36	%	ASTM D471
Change in Ultimate Elongation (60°C, 168 hr, in IRM 902 Oil)	-12	%	ASTM D471
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-33.0	°C	ASTM D746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity (23°C)	8.5E+16	ohms · cm	ASTM D257
Dielectric Constant			ASTM D150
25°C, 1 kHz	2.40		ASTM D150
25°C, 1 MHz	2.40		ASTM D150
Dissipation Factor			ASTM D150
25°C, 1 kHz	9.4E-3		ASTM D150
25°C, 1 MHz	3.8E-3		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating (3.0 mm, Natural Color)	V-0		UL 94
Legal statement			
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Injection	Nominal Value	Unit	

Rear Temperature	199 - 216	°C
Middle Temperature	213 - 221	°C
Front Temperature	221 - 227	°C
Nozzle Temperature	221 - 229	°C
Processing (Melt) Temp	221 - 229	°C
Mold Temperature	25 - 66	°C
Injection Pressure	1.38 - 6.89	MPa
Injection Rate	Moderate-Fast	
Back Pressure	0.172 - 0.345	MPa
Screw Speed	50 - 100	rpm
Cushion	3.81 - 25.4	mm

Injection instructions

Drying is not necessary. However, if moisture is a problem, dry the pellets for 2 to 4 hours at 150°F (65°C).

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	193 - 210	°C
Cylinder Zone 2 Temp.	199 - 216	°C
Cylinder Zone 3 Temp.	213 - 221	°C
Cylinder Zone 4 Temp.	213 - 221	°C
Cylinder Zone 5 Temp.	221 - 227	°C
Die Temperature	221 - 229	°C

Extrusion instructions

Screw Speed: 30 to 100 rpm

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Recommended distributors for this material

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