

Elexar® EL-2934N

Thermoplastic Elastomer

Teknor Apex Company

Message:

Elexar EL-2934N is a high performance UL V-0 flame retardant thermoplastic elastomer designed for electrical applications requiring flexibility over a wide temperature range. Elexar EL-2934N is a high hardness, high density, low flow grade that is UV stabilized and RoHS compliant. This UL listed grade is easily colorable and is suitable for both injection molding and extrusion.

General Information	
Features	High specific gravity
	High tensile strength
	High density
	Good UV resistance
	Good heat aging resistance
	Good coloring
	Low liquidity
	Halogenated
	Sunlight resistance, 720 hours
	General
	brominated
	Extended tensile rate
	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
	ribbon
	Rubber substitution
	Terminal cable sheath material
Agency Ratings	UL 94
RoHS Compliance	RoHS compliance
Appearance	Black
	Natural color

Forms	Particle		
Processing Method	Extrusion		
	Injection molding		

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.30	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	0.30	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 second, injection molding	90		ASTM D2240
Shore A, 5 seconds, injection molding	88		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Strength (Break)	12.4	MPa	ASTM D412
Tensile Elongation (Break)	600	%	ASTM D412
Tear Strength ¹			ASTM D624
Transverse flow: 23°C	39.4	kN/m	ASTM D624
Flow: 23°C	44.0	kN/m	ASTM D624
Compression Set (125°C, 70 hr)	14	%	ASTM D395
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (158°C, 168 hr)	27	%	ASTM D573
Change in Ultimate Elongation in Air (158°C, 168 hr)	-7.0	%	ASTM D573
Change in Tensile Strength (60°C, 168 hr, in IRM 902 Oil)	-4.0	%	ASTM D471
Change in Ultimate Elongation (60°C, 168 hr, in IRM 902 Oil)	-4.0	%	ASTM D471
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-50.0	°C	ASTM D746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity			ASTM D257
23°C	1.7E+16	ohms · cm	ASTM D257
50°C	5.3E+14	ohms · cm	ASTM D257
Dielectric Strength (23°C)	43	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
23°C, 1 MHz	2.53		ASTM D150
23°C, 1 kHz	2.61		ASTM D150
Dissipation Factor			ASTM D150
23°C, 1 MHz	5.8E-3		ASTM D150
23°C, 1 kHz	5.8E-3		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.5 mm, NT, BK, WT)	V-0		UL 94

Oxygen Index	28	%	ASTM D2863
--------------	----	---	------------

Legal statement

The information and recommendations contained in this bulletin are, to the best of our knowledge, accurate and reliable but no guarantee of their accuracy is made. All products are sold upon condition that purchasers shall make their own tests to determine the suitability of such products for their particular purposes and uses and purchaser assumes all risks and liability for the results of use of the products, including use in accordance with seller's recommendations. Nothing in this bulletin constitutes permission or a recommendation to practice or use any invention covered by any patent owned by this company or others. There is no warranty of merchantability and there are no other warranties for the products described. For detailed Product Stewardship information, please contact us. Any product of Teknor Apex, including product names, shall not be used or tested in medical or food contact applications without the prior written acknowledgement of Teknor Apex as to the intended use. Please note that some products may not be available in one or more countries.

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

NOTE

1. C mold, 510mm/min

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

