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/cm³	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

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

Recommended distributors for this material

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