



Ellexar® EL-2934N

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Ellexar EL-2934N is a high performance UL V-0 flame retardant thermoplastic elastomer designed for electrical applications requiring flexibility over a wide temperature range. Ellexar 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

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Brominated • Flame Retardant • General Purpose • Good Colorability • Halogenated	• Heat Aging Resistant • High Density • High Elongation • High Hardness • High Specific Gravity	• High Tensile Strength • Low Flow • Sunlight Resistant (720 hours) • UV Resistant
Uses	• Appliance Wire Insulation • Appliance Wire Jacketing • Cable Jacketing • Connectors	• Flexible Cord Jacketing • Industrial Cable Insulation • Ribbons • Rubber Replacement	• Terminal Cable Jacketing • Underground Power Cable • Wire & Cable Applications • Wire Jacketing
Agency Ratings	• UL 94		
RoHS Compliance	• RoHS Compliant		
UL File Number	• QMFZ2.E54709		
Appearance	• Black	• Natural Color	
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.30		ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	0.30	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Strength (Break)	1800	psi	ASTM D412
Tensile Elongation (Break)	600	%	ASTM D412
Tear Strength ²			ASTM D624
Across Flow : 73°F	225	lbf/in	
Flow : 73°F	251	lbf/in	
Compression Set (257°F, 70 hr)	14	%	ASTM D395
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	90		
Shore A, 5 sec, Injection Molded	88		
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-58.0	°F	ASTM D746

Elexar® EL-2934N

Teknor Apex Company - Thermoplastic Elastomer

Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (316°F, 168 hr)	27	%	ASTM D573
Change in Ultimate Elongation in Air (316°F, 168 hr)	-7.0	%	ASTM D573
Change in Tensile Strength			ASTM D471
140°F, 168 hr, in IRM 902 Oil	-4.0	%	
Change in Ultimate Elongation			ASTM D471
140°F, 168 hr, in IRM 902 Oil	-4.0	%	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity			ASTM D257
73°F	1.7E+16	ohms·cm	
122°F	5.3E+14	ohms·cm	
Dielectric Strength (73°F)	1100	V/mil	ASTM D149
Dielectric Constant			ASTM D150
73°F, 1 kHz	2.61		
73°F, 1 MHz	2.53		
Dissipation Factor			ASTM D150
73°F, 1 kHz	5.8E-3		
73°F, 1 MHz	5.8E-3		
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in, NT, BK, WT)	V-0		UL 94
Oxygen Index	28	%	ASTM D2863

Processing Information		
Injection	Nominal Value	Unit
Rear Temperature	390 to 420	°F
Middle Temperature	415 to 430	°F
Front Temperature	430 to 440	°F
Nozzle Temperature	430 to 445	°F
Processing (Melt) Temp	430 to 445	°F
Mold Temperature	77 to 150	°F
Injection Pressure	200 to 1000	psi
Injection Rate	Moderate-Fast	
Back Pressure	25.0 to 50.0	psi
Screw Speed	50 to 100	rpm
Cushion	0.150 to 1.00	in
Injection Notes		

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

Elexar® EL-2934N

Teknor Apex Company - Thermoplastic Elastomer

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	380 to 410	°F
Cylinder Zone 2 Temp.	390 to 420	°F
Cylinder Zone 3 Temp.	415 to 430	°F
Cylinder Zone 4 Temp.	415 to 430	°F
Cylinder Zone 5 Temp.	430 to 440	°F
Die Temperature	430 to 445	°F

Extrusion Notes

Screw Speed: 30 to 100 rpm

Notes

¹ Typical properties: these are not to be construed as specifications.

² Die C, 20 in/min