



Elexar® EL-2934F

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Elexar® EL-2934F is a general purpose thermoplastic elastomer, available in Nat, BLK, and colors, designed for electrical applications requiring flexibility over a wide temperature range. Elexar® EL-2934F is a medium hardness, high density grade that is UL 94 rated with 720hr sunlight resistance 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 • Filled • Flame Retardant • Good Colorability	• Good Moldability • Halogenated • High Density • High Specific Gravity	• Low Flow • Medium Hardness • Sunlight Resistant (720 hours)
Uses	• Cable Jacketing • Connectors	• Electrical/Electronic Applications • Insulation	• Wire & Cable Applications • Wire Jacketing
Agency Ratings	• UL 94		
RoHS Compliance	• RoHS Compliant		
UL File Number	• QMFZ2.E54709		
Appearance	• Black • Colors Available	• Natural Color • Opaque	
Forms	• Pellets		
Processing Method	• Extrusion		

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)	0.10	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ^{2, 3} (100% Strain, 0.0200 in)	440	psi	ASTM D412
Tensile Stress ^{2, 3} (300% Strain, 0.0200 in)	650	psi	ASTM D412
Tensile Strength ^{2, 3} (Break, 0.0200 in)	1600	psi	ASTM D412
Tensile Elongation ^{2, 3} (Break, 0.0200 in)	600	%	ASTM D412
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	70		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Continuous Use Temperature	221	°F	ASTM D794
Brittleness Temperature	-52.6	°F	ASTM D746
RTI Elec	122	°F	UL 746B
RTI Str	122	°F	UL 746B
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (316°F, 168 hr)	7.0	%	ASTM D573
Change in Ultimate Elongation in Air (316°F, 168 hr)	-11	%	ASTM D573
Change in Tensile Strength 140°F, 168 hr, in IRM 902 Oil	-16	%	ASTM D471
Change in Ultimate Elongation 140°F, 168 hr, in IRM 902 Oil	-13	%	ASTM D471

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Electrical	Nominal Value	Unit	Test Method
Dielectric Constant (1 kHz)	2.60		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.06 in, BK	V-1		
0.06 in, NT, WT, YL	V-0		
Oxygen Index	29	%	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 150F (65C).

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

³ die cut from extruded tapes