Elexar® EL-3954-50

Teknor Apex Company - Thermoplastic Elastomer

Wednesday, April 1, 2026

General Information

Product Description

Elexar EL-3954-50 is a high performance thermoplastic elastomer designed for the electrical market. Elexar EL-3954-50 is a lubricated, medium hardness grade suitable for both injection molding and extrusion.

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Filled • Halogen Free • High Density	• High Specific Gravity • Lubricated • Medium Flow	• Medium Hardness • Slip
Uses	• Appliance Wire Insulation • Appliance Wire Jacketing • Cable Jacketing • Connectors	• Flexible Cord Jacketing • Industrial Cable Insulation • Terminal Cable Jacketing • Underground Power Cable	• Wire & Cable Applications • Wire Jacketing
RoHS Compliance	• RoHS Compliant		
Appearance	• Colors Available	• Natural Color	• Opaque
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.16		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	12	g/10 min	ASTM D1238
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress [2]			ASTM D412
Across Flow : 100% Strain	147	psi	
Flow : 100% Strain	179	psi	
Tensile Stress [2]			ASTM D412
Across Flow : 300% Strain	285	psi	
Flow : 300% Strain	305	psi	
Tensile Strength [2]			ASTM D412
Across Flow : Break	921	psi	
Flow : Break [3]	1300	psi	
Flow : Break	712	psi	
Tensile Elongation [2]			ASTM D412
Across Flow : Break	670	%	
Flow : Break [3]	750	%	
Flow : Break	680	%	
Tear Strength [2]			ASTM D624
Across Flow	118	lbf/in	
Flow	99.0	lbf/in	
Compression Set [4]			ASTM D395B
73°F, 22 hr	14	%	
158°F, 22 hr	45	%	

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Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	46		
Shore A, 5 sec, Injection Molded	44		

Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -76.0	°F	ASTM D746

Legal Statement

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	370 to 420	°F
Middle Temperature	370 to 420	°F
Front Temperature	370 to 420	°F
Nozzle Temperature	370 to 420	°F
Processing (Melt) Temp	370 to 420	°F
Mold Temperature	60 to 90	°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).

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	350 to 400	°F
Cylinder Zone 2 Temp.	350 to 400	°F
Cylinder Zone 3 Temp.	350 to 400	°F
Cylinder Zone 4 Temp.	350 to 400	°F
Cylinder Zone 5 Temp.	350 to 400	°F
Die Temperature	350 to 400	°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] Extruded tape

[4] Type 1

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