



Elexar® EL-3954-70

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Elexar EL-3954-70 is a high performance thermoplastic elastomer designed for the electrical market. Elexar EL-3954-70 is a lubricated, medium hardness grade suitable for injection molding.

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	• Connectors • Grommets	• Strain Reliefs • Wire & Cable Applications	
Agency Ratings	• UL 94		
RoHS Compliance	• RoHS Compliant		
UL File Number	• QMFZ2.E54709		
Appearance	• Colors Available	• Opaque	
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.18		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	15	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ²			ASTM D412
Across Flow : 100% Strain	308	psi	
Flow : 100% Strain	392	psi	
Tensile Stress ²			ASTM D412
Across Flow : 300% Strain	453	psi	
Flow : 300% Strain	542	psi	
Tensile Strength ²			ASTM D412
Across Flow : Break	1440	psi	
Flow : Break ³	1650	psi	
Flow : Break	1200	psi	
Tensile Elongation ²			ASTM D412
Across Flow : Break	740	%	
Flow : Break ³	700	%	
Flow : Break	670	%	
Tear Strength ²			ASTM D624
Across Flow	189	lbf/in	
Flow	177	lbf/in	
Compression Set ⁴			ASTM D395B
73°F, 22 hr	24	%	
158°F, 22 hr	57	%	

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Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	71		
Shore A, 5 sec, Injection Molded	69		
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -76.0	°F	ASTM D746
RTI Elec	194	°F	UL 746B
RTI Str	194	°F	UL 746B
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength	1100	V/mil	ASTM D149
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in, All Colors)	HB		UL 94

Processing Information

Injection	Nominal Value	Unit
Rear Temperature	360 to 400	°F
Middle Temperature	360 to 400	°F
Front Temperature	360 to 400	°F
Nozzle Temperature	360 to 400	°F
Processing (Melt) Temp	360 to 400	°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).

Notes

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

² Die C, 20 in/min

³ Extruded tape

⁴ Type 1