Elexar® EL-8623C (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

Wednesday, April 1, 2026

General Information

Product Description

Elexar EL-8623C is a high performance thermoplastic elastomer designed for electrical applications requiring flexibility over a wide temperature range. Elexar EL-8623C is a high hardness, high density, RoHS compliant, flame retardant 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	• Chemical Resistant • Filled • Flame Retardant • Good Adhesion • Good Colorability	• Good Moldability • Good Processability • Good Toughness • Halogenated • High Density	• High Hardness • High Specific Gravity • Low Flow
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	• Opaque	
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.20		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	2.6	g/10 min	ASTM D1238
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength [2, 3] (Yield, 73°F, 0.0200 in)	3250	psi	ASTM D412
Tensile Elongation [2, 3] (Break, 73°F, 0.0200 in)	550	%	ASTM D412
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore D, 1 sec	50		
Shore D, 5 sec	48		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature	-58.0	°F	ASTM D746
Aging	**Nominal Value**	**Unit**	**Test Method**
Change in Tensile Strength in Air [3] (277°F, 168 hr)	12	%	ASTM D573
Change in Ultimate Elongation in Air [3] (277°F, 168 hr)	-11	%	ASTM D573
Change in Tensile Strength [3]			ASTM D471
140°F, 168 hr, in IRM 902 Oil	-14	%	
Change in Ultimate Elongation			ASTM D471
140°F, 168 hr, in IRM 902 Oil	-0.90	%	

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Electrical	Nominal Value	Unit	Test Method
Volume Resistivity			ASTM D257
73°F	3.2E+16	ohms·cm	
122°F	5.1E+15	ohms·cm	
Dielectric Strength	1100	V/mil	ASTM D149
Dielectric Constant			ASTM D150
1 kHz	2.45		
1 MHz	2.40		
Dissipation Factor			ASTM D150
1 kHz	3.4E-3		
1 MHz	1.7E-3		

Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in, NC)	HB		UL 94
Oxygen Index	24	%	ASTM D2863

Legal Statement

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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).

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

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Notes

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

[2] Die C, 20 in/min

[3] Samples were die cut from extruded tapes.

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