



Elexar® EL-8623A (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Elexar EL-8623A is a high performance thermoplastic elastomer designed for electrical applications requiring flexibility over a wide temperature range. Elexar EL-8623A is a RoHS compliant, flame retardant grade suitable for both injection molding and extrusion.

General

Material Status	• Preliminary Data		
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 • 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	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.15		ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	2.5	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (100% Strain)	1170	psi	ASTM D412
Tensile Stress (300% Strain)	1550	psi	ASTM D412
Tensile Strength (Yield)	3300	psi	ASTM D412
Tensile Elongation (Break)	580	%	ASTM D412
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore D, 1 sec	58		
Shore D, 5 sec	54		
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-45.4	°F	ASTM D746
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (277°F, 168 hr)	-19	%	ASTM D573
Change in Ultimate Elongation in Air (277°F, 168 hr)	-9.0	%	ASTM D573
Change in Tensile Strength 140°F, 168 hr, in IRM 902 Oil	-29	%	ASTM D471
Change in Ultimate Elongation 140°F, 168 hr, in IRM 902 Oil	-4.0	%	ASTM D471
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity (73°F)	2.2E+16	ohms·cm	ASTM D257
Dielectric Strength	1000	V/mil	ASTM D149

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Electrical	Nominal Value	Unit	Test Method
Dielectric Constant			ASTM D150
1 kHz	2.40		
1 MHz	2.40		

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

Notes

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