Elexar® EL-1934G

Teknor Apex Company - Thermoplastic Elastomer

Friday, June 30, 2017

General Information

Product Description

Elexar EL-1934G is a high performance UL V-0 flame retardant thermoplastic elastomer designed for electrical applications requiring flexibility over a wide temperature range. Elexar EL-1934G is a medium hardness, high density grade that is UV stabilized and RoHS compliant. This UL listed grade is easily colorable 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	• Chemical Resistant • Filled • Flame Retardant • Good Adhesion • Good Colorability • Good Flexibility	• Good Moldability • Good Processability • Good Toughness • High Density • High Specific Gravity • Low Flow	• Medium Hardness • Sunlight Resistant (720 hours) • UV Resistant • Weather Resistant
Uses	• Cable Jacketing • Electrical/Electronic Applications	• Industrial Applications • Insulation	• Wire & Cable Applications • Wire Jacketing
RoHS Compliance	• RoHS Compliant		
UL File Number	• QMTT2.E73402	• QMFZ2.E54709	
Appearance	• Natural Color	• Opaque	
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.30		ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/5.0 kg)	7.0	g/10 min	ASTM D1238
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress (100% Strain)	219	psi	ASTM D412
Tensile Stress (300% Strain)	372	psi	ASTM D412
Tensile Strength (Break)	834	psi	ASTM D412
Tensile Elongation (Break)	550	%	ASTM D412
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore A)	58		ASTM D2240
Thermal	**Nominal Value**	**Unit**	**Test Method**
Continuous Use Temperature	221	°F	UL 1581
Brittleness Temperature	< -53.0	°F	ASTM D746
RTI Elec	122	°F	UL 746
RTI Str	122	°F	UL 746
Aging	**Nominal Value**	**Unit**	**Test Method**
Change in Tensile Strength in Air (277°F, 168 hr)	31	%	ASTM D573
Change in Ultimate Elongation in Air (277°F, 168 hr)	29	%	ASTM D573
Change in Tensile Strength 140°F, 168 hr, in IRM 902 Oil	-2.3	%	ASTM D471
Change in Ultimate Elongation 140°F, 168 hr, in IRM 902 Oil	23	%	ASTM D471
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity (122°F)	3.6E+14	ohms·cm	ASTM D257

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Electrical	Nominal Value	Unit	Test Method
Dielectric Strength	1000	V/mil	ASTM D149
Dielectric Constant (1 kHz)	2.64		ASTM D150
Dissipation Factor	5.0E-3		ASTM D150

Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.05 in, All Colors)	V-0		UL 94
Oxygen Index	29	%	ASTM D2863

Additional Information

UL 1581: Meets 720 hour sunlight resistance

Legal Statement

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.

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