



Elexar® EL-1934G AP NAT (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Elexar EL-1934G AP 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 AP is a medium hardness, high density grade that is UV stabilized. This UL listed grade is easily colorable and is 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 Flexibility	• Good Moldability • Good Processability • Good Toughness • Good Weather Resistance • High Density • High Specific Gravity	• Low Flow • Medium Hardness • Sunlight Resistant (720 hours) • UV Resistant
Uses	• Cable Jacketing • Electrical/Electronic Applications	• Industrial Applications • Insulation	• Wire & Cable Applications • Wire Jacketing
Appearance	• Natural Color	• Opaque	
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / 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 746B
RTI Str	122	°F	UL 746B
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 IIR 902 Oil	-2.3	%	ASTM D471
Change in Ultimate Elongation 140°F, 168 hr, in IIR 902 Oil	23	%	ASTM D471

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Electrical	Nominal Value	Unit	Test Method
Volume Resistivity (122°F)	3.6E+14	ohms·cm	ASTM D257
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

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.