+135-3858-6433 (GuangDong)
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TEKNOR APEX

Elexar® EL-1934A

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Elexar EL-1934A is a high performance UL V-0 flame retardant thermoplastic elastomer designed for electrical applications requiring flexibility over a wide temperature range. Elexar EL-1934A is a high hardness, high density, high flow grade that is UV stabilized . 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 • Electrically Insulating • Flame Retardant • General Purpose • Good Adhesion • Good Colorability	• Good Electrical Properties • Good Flexibility • Good Toughness • Halogenated • High Density • High Flow	• High Hardness • High Specific Gravity • Resilient • Slip • Sunlight Resistant (720 hours) • UV Resistant
Uses	• Cable Jacketing • Electrical/Electronic Applications • Flame Retardant Insulation	• General Purpose • Industrial Applications • Rubber Replacement	• Wire & Cable Applications • Wire Jacketing
Agency Ratings	• UL 1581	• UL 94	
UL File Number	• QMTT2.E73402	• QMFZ2.E54709	
Appearance	• Colors Available	• 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) (200°C/5.0 kg)	18	g/10 min	ASTM D1238
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress [2] (100% Strain)	538	psi	ASTM D412
Tensile Stress [2] (300% Strain)	737	psi	ASTM D412
Tensile Strength (Break)	1610	psi	ASTM D412
Tensile Elongation (Break)	630	%	ASTM D412
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A, 1 sec	82		
Shore A, 5 sec	80		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Continuous Use Temperature	221	°F	UL 1581
Brittleness Temperature	< -50.0	°F	ASTM D746
RTI Elec	122	°F	UL 746
RTI Imp	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)	-4.0	%	ASTM D573
Change in Ultimate Elongation in Air (277°F, 168 hr)	-3.2	%	ASTM D573
Change in Tensile Strength			ASTM D471
140°F, 168 hr, in IRM 902 Oil	-11	%	

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Aging	Nominal Value	Unit	Test Method
Change in Ultimate Elongation			ASTM D471
140°F, 168 hr, in IRM 902 Oil	-5.5	%	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity (122°F)	7.4E+14	ohms·cm	ASTM D257
Dielectric Strength (73°F, 0.0240 in)	1200	V/mil	ASTM D149
Dielectric Constant (73°F, 1 kHz)	2.40		ASTM D150
Dissipation Factor (73°F, 1 kHz)	3.3E-3		ASTM D150
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (0.05 to 0.06 in, All Colors)	V-0		UL 94
Oxygen Index	28	%	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.

[2] 20 in/min