



Ellexar® EL-1934F

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Ellexar EL-1934F is a high performance UL V-0 flame retardant thermoplastic elastomer designed for electrical applications requiring flexibility over a wide temperature range. Ellexar EL-1934F 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	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Brominated • Electrically Insulating • Filled • Flame Retardant • Good Colorability	• Good Flexibility • Halogenated • High Density • High Flow • High Specific Gravity	• Medium Hardness • Sunlight Resistant (720 hours) • UV Stabilized
Uses	• Cable Jacketing • Connectors	• Insulation • Wire & Cable Applications	
Agency Ratings	• UL 1581		
UL File Number	• QMTT2.E73402		
Appearance	• Colors Available	• 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)	6.0	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Strength ^{2, 3} (Break)	1400	psi	ASTM D412
Tensile Elongation ^{2, 3} (Break)	600	%	ASTM D412
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	70		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Continuous Use Temperature	221	°F	UL 1581
Brittleness Temperature	< -76.0	°F	ASTM D746
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (277°F, 168 hr)	5.0	%	ASTM D573
Change in Ultimate Elongation in Air (277°F, 168 hr)	-2.0	%	ASTM D573
Change in Tensile Strength 140°F, 168 hr, in IRM 902 Oil	-16	%	ASTM D471
Change in Ultimate Elongation 140°F, 168 hr, in IRM 902 Oil	-4.0	%	ASTM D471
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength	970	V/mil	ASTM D149
Dielectric Constant (1 kHz)	2.30		ASTM D150
Dissipation Factor (1 kHz)	3.0E-3		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.05 in)	V-0		UL 94
Oxygen Index	31	%	ASTM D2863

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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.	420 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 Die C, 20 in/min		
³ die cut from extruded tapes		