



Ellexar® EL-1934H AP NAT (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Ellexar EL-1934H AP is a high performance thermoplastic elastomer designed for electrical applications requiring flexibility over a wide temperature range. Ellexar EL-1934H AP is a low hardness, high density, 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	• Filled • Flame Retardant • Good Flow	• High Density • High Specific Gravity • Light Stabilized	• Low Hardness • Lubricated • Medium 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
Appearance	• Black • 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	1.26		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	25	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ²			ASTM D412
Across Flow : 100% Strain	109	psi	
Flow : 100% Strain	151	psi	
Tensile Stress ²			ASTM D412
Across Flow : 300% Strain	174	psi	
Flow : 300% Strain	228	psi	
Tensile Strength ²			ASTM D412
Across Flow : Break	536	psi	
Flow : Break	400	psi	
Tensile Elongation ²			ASTM D412
Across Flow : Break	760	%	
Flow : Break	640	%	
Tear Strength ²			ASTM D624
Across Flow	88.0	lbf/in	
Flow	80.0	lbf/in	
Compression Set ³			ASTM D395B
73°F, 22 hr	16	%	
158°F, 22 hr	47	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	37		
Shore A, 5 sec, Injection Molded	35		

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Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.12 in)	V-0		UL 94

Processing Information

Injection	Nominal Value	Unit
Rear Temperature	380 to 420	°F
Middle Temperature	380 to 420	°F
Front Temperature	380 to 420	°F
Nozzle Temperature	380 to 420	°F
Processing (Melt) Temp	380 to 420	°F
Mold Temperature	60 to 90	°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.	360 to 400	°F
Cylinder Zone 2 Temp.	360 to 400	°F
Cylinder Zone 3 Temp.	360 to 400	°F
Cylinder Zone 4 Temp.	360 to 400	°F
Cylinder Zone 5 Temp.	360 to 400	°F
Die Temperature	360 to 400	°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 Type 1