



Telcar® TL-1934E

Teknor Apex Company - Styrenic Thermoplastic Elastomer

General Information

Product Description

Telcar TL-1934E is a general purpose thermoplastic elastomer designed for electrical applications requiring flexibility over a wide temperature range. Telcar TL-1934E is a high hardness, high density grade that is UL 94 rated with 720hr sunlight resistance. This grade 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 • Flame Retardant • General Purpose • Good Colorability • Good Flexibility	• Halogenated • High Density • High Hardness • High Specific Gravity • Low Flow	• Slip • Sunlight Resistant (720 hours) • UV Resistant
Uses	• Appliance Wire Insulation • Cable Jacketing	• Flexible Cord Insulation • 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 Strength ² (Break, 73°F)	1400	psi	ASTM D412
Tensile Elongation ² (Break)	550	%	ASTM D412
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	83		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Continuous Use Temperature	221	°F	UL 1581
Brittleness Temperature	-74.2	°F	ASTM D746
RTI Elec	122	°F	UL 746B
RTI Imp	122	°F	UL 746B

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Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air			ASTM D573
268°F, 3600 hr	-4.0	%	
277°F, 168 hr	0.0	%	
316°F, 168 hr	-11	%	
Change in Ultimate Elongation in Air			ASTM D573
268°F, 3600 hr	-16	%	
277°F, 168 hr	-10	%	
316°F, 168 hr	-15	%	
Change in Tensile Strength			ASTM D471
140°F, 168 hr, in IRM 902 Oil	-12	%	
Change in Ultimate Elongation			ASTM D471
140°F, 168 hr, in IRM 902 Oil	-10	%	
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength	900	V/mil	ASTM D149
Dielectric Constant	2.40		ASTM D150
Dissipation Factor	4.0E-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	30	%	ASTM D2863
Additional Information			
UL-1581: Meets 720 hr sunlight resistance.			
This material is not recommended for direct contact with fPVC.			
No adverse effects are expected when in contact with XLPE and PUR			

Processing Information

Injection	Nominal Value	Unit
Rear Temperature	340 to 380	°F
Middle Temperature	350 to 390	°F
Front Temperature	360 to 400	°F
Nozzle Temperature	370 to 410	°F
Processing (Melt) Temp	370 to 410	°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

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Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	330 to 370	°F
Cylinder Zone 2 Temp.	340 to 380	°F
Cylinder Zone 3 Temp.	350 to 390	°F
Cylinder Zone 4 Temp.	365 to 405	°F
Cylinder Zone 5 Temp.	360 to 400	°F
Die Temperature	374 to 410	°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