

Telcar® TL-1934E

Teknor Apex Company - Styrenic Thermoplastic Elastomer

Saturday, September 14, 2024

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	g/cm ³	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, 23°C)	9.65	MPa	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	105	°C	UL 1581
Brittleness Temperature	-59.0	°C	ASTM D746
RTI Elec	50.0	°C	UL 746B
RTI Imp	50.0	°C	UL 746B

Revision Date: 8/22/2019

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Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air			ASTM D573
131°C, 3600 hr	-4.0	%	
136°C, 168 hr	0.0	%	
158°C, 168 hr	-11	%	
Change in Ultimate Elongation in Air			ASTM D573
131°C, 3600 hr	-16	%	
136°C, 168 hr	-10	%	
158°C, 168 hr	-15	%	
Change in Tensile Strength			ASTM D471
60°C, 168 hr, in IRM 902 Oil	-12	%	
Change in Ultimate Elongation			ASTM D471
60°C, 168 hr, in IRM 902 Oil	-10	%	
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength	35	kV/mm	ASTM D149
Dielectric Constant	2.40		ASTM D150
Dissipation Factor	4.0E-3		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.4 to 1.6 mm, 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			

Legal Statement

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	171 to 193	°C
Middle Temperature	177 to 199	°C
Front Temperature	182 to 204	°C
Nozzle Temperature	188 to 210	°C
Processing (Melt) Temp	188 to 210	°C
Mold Temperature	25 to 66	°C
Injection Pressure	1.38 to 6.89	MPa
Injection Rate	Moderate-Fast	
Back Pressure	0.172 to 0.345	MPa
Screw Speed	50 to 100	rpm
Cushion	3.81 to 25.4	mm

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Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	166 to 188	°C
Cylinder Zone 2 Temp.	171 to 193	°C
Cylinder Zone 3 Temp.	177 to 199	°C
Cylinder Zone 4 Temp.	185 to 207	°C
Cylinder Zone 5 Temp.	182 to 204	°C
Die Temperature	190 to 210	°C

Extrusion Notes

Screw Speed: 30 to 100 rpm

Notes

¹ Typical properties: these are not to be construed as specifications.

² 510 mm/min

Teknor Apex Company Corporate Headquarters	Teknor Apex B.V.	Teknor Apex (Suzhou) Advanced Polymer Compounds Co. Pte. Ltd.	Teknor Apex Asia Pacific PTE. LTD.
<i>In U.S. for Vinyls, TPEs, Colorants,</i>	Brightlands Chemelot Campus Umonderbaan 22	No. 78 Ping Sheng Road	41 Shipyard Road
<i>Engineered Thermoplastics (Chem Polymer)</i>	6167 RD Geleen, Netherlands	Suzhou Industrial Park	Singapore 628134
505 Central Avenue	Phone: +31 46 7020 950	Jiangsu, China 215126	Phone: (65) 6265-2544
Pawtucket, Rhode Island 02861 U.S.	Fax: +31 46 7020 990	Phone: (86) 512-6287-1550	Fax: (65) 6265-1821
Phone: 401-725-8000	www.teknorapex.com	Fax: (86) 512-6288-8371	www.teknorapex.com
Fax: 401-725-8095	tpe@teknorapex.com	www.teknorapex.com	infotaap@teknorapex.com
Toll Free (U.S. only) 800-556-3864		infotaap@teknorapex.com	
www.teknorapex.com			
info@teknorapex.com			

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