

Telcar® TL-2934F

Teknor Apex Company - Thermoplastic Elastomer

Saturday, September 14, 2024

General Information

Product Description

Telcar TL-2934F is a general purpose thermoplastic elastomer, available in Nat, BLK, and colors, designed for electrical applications requiring flexibility over a wide temperature range. Telcar TL-2934F is a medium hardness, high density grade that is UL 94 rated with 720hr sunlight resistance 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 • Filled • Flame Retardant • Good Colorability	• Good Moldability • Halogenated • High Density • High Specific Gravity	• Low Flow • Medium Hardness • Sunlight Resistant (720 hours)
Uses	• Cable Jacketing • Connectors • Electrical/Electronic Applications	• Insulation • Rubber Replacement • Wire & Cable Applications	• Wire Jacketing
Agency Ratings	• UL 94		
RoHS Compliance	• RoHS Compliant		
UL File Number	• QMFZ2.E54709		
Appearance	• Black • Natural Color	• White • Yellow	
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.30	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)	0.10	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ^{2,3} (100% Strain, 0.508 mm)	3.03	MPa	ASTM D412
Tensile Stress ^{2,3} (300% Strain, 0.508 mm)	4.48	MPa	ASTM D412
Tensile Strength ^{2,3} (Break, 0.508 mm)	11.0	MPa	ASTM D412
Tensile Elongation ^{2,3} (Break, 0.508 mm)	600	%	ASTM D412
Tear Strength ²			ASTM D624
Across Flow	34.4	kN/m	
Flow	33.7	kN/m	
Compression Set ⁴			ASTM D395B
23°C, 22 hr	25	%	
70°C, 22 hr	54	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	72		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Continuous Use Temperature	105	°C	ASTM D794
Brittleness Temperature	-47.0	°C	ASTM D746
RTI Elec	50.0	°C	UL 746B
RTI Str	50.0	°C	UL 746B

Revision Date: 1/24/2019

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Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (158°C, 168 hr)	7.0	%	ASTM D573
Change in Ultimate Elongation in Air (158°C, 168 hr)	-11	%	ASTM D573
Change in Tensile Strength 60°C, 168 hr, in IRM 902 Oil	-16	%	ASTM D471
Change in Ultimate Elongation 60°C, 168 hr, in IRM 902 Oil	-13	%	ASTM D471
Electrical	Nominal Value	Unit	Test Method
Dielectric Constant (1 kHz)	2.60		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.5 mm, BK	V-1		
1.5 mm, NT, WT, YL	V-0		
Oxygen Index	29	%	ASTM D2863
Fill Analysis	Nominal Value	Unit	Test Method
Apparent Viscosity (200°C, 207 sec ⁻¹)	315	Pa·s	ASTM D3835

Legal Statement

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	199 to 216	°C
Middle Temperature	213 to 221	°C
Front Temperature	221 to 227	°C
Nozzle Temperature	221 to 229	°C
Processing (Melt) Temp	221 to 229	°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

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.	193 to 210	°C
Cylinder Zone 2 Temp.	199 to 216	°C
Cylinder Zone 3 Temp.	213 to 221	°C
Cylinder Zone 4 Temp.	213 to 221	°C
Cylinder Zone 5 Temp.	221 to 227	°C
Die Temperature	221 to 229	°C

Extrusion Notes

Screw Speed: 30 to 100 rpm

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Notes

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

² Die C, 510 mm/min

³ die cut from extruded tapes

⁴ Type 1

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