Telcar® TL-2934N

Teknor Apex Company - Thermoplastic Elastomer

Saturday, September 14, 2024

General Information

Product Description

Telcar TL-2934N is a high performance UL V-0 flame retardant thermoplastic elastomer designed for electrical applications requiring flexibility over a wide temperature range. Telcar TL-2934N is a high hardness, high density, low flow grade that is UV stabilized and RoHS compliant. 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 • Flame Retardant • General Purpose • Good Colorability • Halogenated	• Heat Aging Resistant • High Density • High Elongation • High Hardness • High Specific Gravity	• High Tensile Strength • Low Flow • Sunlight Resistant (720 hours) • UV Resistant
Uses	• Appliance Wire Insulation • Appliance Wire Jacketing • Cable Jacketing • Connectors	• Flexible Cord Jacketing • Industrial Cable Insulation • Ribbons • Rubber Replacement	• Terminal Cable Jacketing • Underground Power Cable • Wire & Cable Applications • Wire Jacketing
Agency Ratings	• UL 94		
RoHS Compliance	• RoHS Compliant		
UL File Number	• QMFZ2.E54709		
Appearance	• Black	• Natural Color	
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.30	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	0.30	g/10 min	ASTM D1238
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (Break)	12.4	MPa	ASTM D412
Tensile Elongation (Break)	600	%	ASTM D412
Tear Strength [2]			ASTM D624
Across Flow : 23°C	39.4	kN/m	
Flow : 23°C	44.0	kN/m	
Compression Set (125°C, 70 hr)	14	%	ASTM D395
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	90		
Shore A, 5 sec, Injection Molded	88		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature	-50.0	°C	ASTM D746

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Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (158°C, 168 hr)	27	%	ASTM D573
Change in Ultimate Elongation in Air (158°C, 168 hr)	-7.0	%	ASTM D573
Change in Tensile Strength			ASTM D471
60°C, 168 hr, in IRM 902 Oil	-4.0	%	
Change in Ultimate Elongation			ASTM D471
60°C, 168 hr, in IRM 902 Oil	-4.0	%	

Electrical	Nominal Value	Unit	Test Method
Volume Resistivity			ASTM D257
23°C	1.7E+16	ohms·cm	
50°C	5.3E+14	ohms·cm	
Dielectric Strength (23°C)	43	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
23°C, 1 kHz	2.61		
23°C, 1 MHz	2.53		
Dissipation Factor			ASTM D150
23°C, 1 kHz	5.8E-3		
23°C, 1 MHz	5.8E-3		

Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.5 mm, NT, BK, WT)	V-0		UL 94
Oxygen Index	28	%	ASTM D2863

Legal Statement

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).

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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

Notes

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

[2] Die C, 510 mm/min

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