

# Telcar® TL-8730R

Teknor Apex Company - Thermoplastic Elastomer

Friday, June 30, 2017

## General Information

### Product Description

Telcar TL-8730R is a high performance, flame retardant thermoplastic elastomer designed for electrical applications requiring flexibility over a wide temperature range. Telcar TL-8730R is a high durometer grade that is UV stabilized and RoHS compliant. This grade is UL listed 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	• Flame Retardant • General Purpose • Good Colorability • Good Flexibility • Halogenated • Heat Aging Resistant	• High Density • High Elasticity • High Elongation • High Hardness • High Specific Gravity • High Tensile Strength	• Medium Flow • Ozone Resistant • Sunlight Resistant (720 hours) • UV Resistant • Weather Resistant
Uses	• Cable Jacketing • Electrical Parts • Electrical/Electronic Applications	• General Purpose • Insulation • Rubber Replacement	• Wire & Cable Applications • Wire Jacketing
Agency Ratings	• UL 1581	• UL 94	
RoHS Compliance	• RoHS Compliant		
UL File Number	• QMTT2.73402	• QMFZ2.E54709	
Appearance	• Opaque		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

## ASTM & ISO Properties <sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.24		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	16	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress <sup>2,3</sup> (100% Strain, 0.0200 in)	650	psi	ASTM D412
Tensile Stress <sup>2,3</sup> (300% Strain, 0.0200 in)	900	psi	ASTM D412
Tensile Strength <sup>2,3</sup> (Break, 0.0200 in)	1800	psi	ASTM D412
Tensile Elongation <sup>2,3</sup> (Break, 0.0200 in)	550	%	ASTM D412
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	86		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Continuous Use Temperature	221	°F	UL 1581
Brittleness Temperature	< -76.0	°F	ASTM D746
RTI Elec	122	°F	UL 746
RTI Str	122	°F	UL 746
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (277°F, 168 hr)	10	%	ASTM D573
Change in Ultimate Elongation in Air (277°F, 168 hr)	4.0	%	ASTM D573
Change in Tensile Strength 140°F, 168 hr, in IRM 902 Oil	-1.0	%	ASTM D471
Change in Ultimate Elongation 140°F, 168 hr, in IRM 902 Oil	3.0	%	ASTM D471

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Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	980	V/mil	ASTM D149
Dielectric Constant (1 kHz)	2.40		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.06 in, All Colors		V-2	
0.06 in, NT, WT, BK		V-0	
Oxygen Index	26	%	ASTM D2863

**Legal Statement**

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### 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
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.	350 to 390	°F
Cylinder Zone 5 Temp.	360 to 400	°F
Die Temperature	374 to 410	°F

**Extrusion Notes**

Screw Speed: 30 to 100 rpm

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Die C, 20 in/min

<sup>3</sup> die cut from extruded tapes



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## Teknor Apex Company - Thermoplastic Elastomer

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