

Telcar® TL-8730R

Teknor Apex Company - Thermoplastic Elastomer

Saturday, September 14, 2024

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. 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 • Good Weather Resistance • 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
Uses	• Cable Jacketing • Electrical Parts • Electrical/Electronic Applications	• General Purpose • Insulation • Rubber Replacement	• Wire & Cable Applications • Wire Jacketing
Agency Ratings	• UL 1581	• UL 94	
UL File Number	• QMFZ2.E54709	• QMTT2.73402	
Appearance	• Colors Available	• Natural Color	• Opaque
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.24	g/cm ³	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 ^{2,3} (100% Strain, 0.508 mm)	4.48	MPa	ASTM D412
Tensile Stress ^{2,3} (300% Strain, 0.508 mm)	6.21	MPa	ASTM D412
Tensile Strength ^{2,3} (Break, 0.508 mm)	12.4	MPa	ASTM D412
Tensile Elongation ^{2,3} (Break, 0.508 mm)	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	105	°C	UL 1581
Brittleness Temperature	< -60.0	°C	ASTM D746
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (136°C, 168 hr)	10	%	ASTM D573
Change in Ultimate Elongation in Air (136°C, 168 hr)	-4.0	%	ASTM D573
Change in Tensile Strength 60°C, 168 hr, in IRM 902 Oil	-1.0	%	ASTM D471
Change in Ultimate Elongation 60°C, 168 hr, in IRM 902 Oil	3.0	%	ASTM D471

Revision Date: 8/23/2019

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Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	39	kV/mm	ASTM D149
Dielectric Constant (1 kHz)	2.40		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.5 mm, All Colors	V-2		
1.5 mm, NT, WT, BK	V-0		
Oxygen Index	26	%	ASTM D2863

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
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.	177 to 199	°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 Die C, 510 mm/min

³ die cut from extruded tapes

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