Telcar® TL-8712R

Thermoplastic Elastomer

Teknor Apex Company

Message:

Telcar TL-8712R is a flame retardant thermoplastic elastomer designed for electrical applications requiring flexibility over a wide termperture range. Telcar TL-8712R is a medium durometer grade that is RoHS compliant. This grade is suitable for both injection molding and extrusion.

General Information	
Features	High elasticity
	High tensile strength
	Good heat aging resistance
	Good flexibility
	Good coloring
	Low liquidity
	Halogenated
	General
	Extended tensile rate
	Flame retardancy
Uses	Underground cable
	Cable sheath
	Electrical wire sheath material
	Electrical conductor insulation material
	Wire and cable applications
	Wire sheath
	Industrial cable insulation material
	Connector
	cord sheath
	Terminal cable sheath material
RoHS Compliance	RoHS compliance
Appearance	Opacity
Forms	Particle
Processing Method	Extrusion
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.08	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	3.5	g/10 min	ASTM D1238

Hardness	Nominal Value	Unit	Test Method

Durometer Hardness (Shore A)	71		ASTM D2240
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress [1]			ASTM D412
100% strain, 0.508mm [2]	2.48	MPa	ASTM D412
300% strain, 0.508mm [3]	3.65	MPa	ASTM D412
Tensile Strength (fracture, 0.508mm)	13.8	MPa	ASTM D412
Tensile Elongation (fracture, 0.508mm)	680	%	ASTM D412
Aging	**Nominal Value**	**Unit**	**Test Method**
Change in Tensile Strength in Air (136°C, 168 hr)	9.0	%	ASTM D573
Change in Ultimate Elongation in Air (136°C, 168 hr)	-1.0	%	ASTM D573
Change in Tensile Strength (60°C, 168 hr, in IRM 902 Oil)	-8.0	%	ASTM D471
Change in Ultimate Elongation (60°C, 168 hr, in IRM 902 Oil)	3.0	%	ASTM D471
Thermal	**Nominal Value**	**Unit**	**Test Method**
Continuous Use Temperature	105	°C	ASTM D794
Brittleness Temperature	< -60.0	°C	ASTM D746
RTI Elec	50.0	°C	UL 746
RTI	50.0	°C	UL 746
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity (50°C)	6.6E+15	ohms·cm	ASTM D257
Dielectric Strength	26	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
1 kHz	2.10		ASTM D150
1 MHz	2.10		ASTM D150
Flammability	**Nominal Value**	**Unit**	**Test Method**
Oxygen Index	20	%	ASTM D2863
Injection	**Nominal Value**	**Unit**	
Rear Temperature	171 - 193	°C	
Middle Temperature	177 - 199	°C	
Front Temperature	182 - 204	°C	
Nozzle Temperature	188 - 210	°C	
Processing (Melt) Temp	188 - 210	°C	
Mold Temperature	25.0 - 65.6	°C	
Injection Pressure	1.38 - 6.89	MPa	
Injection Rate	Moderate-Fast		
Back Pressure	0.172 - 0.345	MPa	
Screw Speed	50 - 100	rpm	
Cushion	3.81 - 25.4	mm	
Extrusion	**Nominal Value**	**Unit**	
Cylinder Zone 1 Temp.	166 - 188	°C	

Cylinder Zone 2 Temp.	171 - 193	°C
Cylinder Zone 3 Temp.	177 - 199	°C
Cylinder Zone 5 Temp.	182 - 204	°C
Die Temperature	190 - 210	°C

Extrusion instructions
Screw Speed: 30 to 100 rpm

NOTE	
1.	die cut from extruded tapes
2.	Mouth die C, 510mm/min
3.	C mold, 510mm/min

Recommended distributors for this material

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