

Elexar® EL-8614

Thermoplastic Elastomer

Teknor Apex Company

Message:

Elexar® EL-8614 is a thermoplastic elastomer (TPE) material. This product is available in North America, Africa and the Middle East, Latin America, Europe or Asia Pacific. The processing method is extrusion or injection molding.

Elexar® The main features of the EL-8614 are:

flame retardant/rated flame

Flame Retardant

high hardness

Typical application areas include:

Wire and cable

Electrical/electronic applications

General Information			
UL YellowCard	E54709-245361	E142591-100745025	
Features	High specific gravity		
	High density		
	Low liquidity		
	Halogenated		
	Fill		
	High hardness		
	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		
Appearance	Opacity		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.16	g/cm³	ASTM D792

Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	3.0	g/10 min	ASTM D1238
Water Absorption ¹ (equilibrium, 80°C)	3.3	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shaw A, 5 seconds	96		ASTM D2240
Shaw D, 5 seconds	54		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
100% strain	6.84	MPa	ASTM D412
300% strain	8.46	MPa	ASTM D412
Tensile Strength (Yield)	15.5	MPa	ASTM D412
Tensile Elongation (Break)	570	%	ASTM D412
Tear Strength	66.5	kN/m	ASTM D624
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (136°C, 168 hr)	-14	%	ASTM D573
Change in Ultimate Elongation in Air (136°C, 168 hr)	-20	%	ASTM D573
Change in Tensile Strength (60°C, 168 hr, in ASTM #2 Oil)	-18	%	ASTM D471
Change in Ultimate Elongation (60°C, 168 hr, in ASTM #2 Oil)	-14	%	ASTM D471
Thermal	Nominal Value	Unit	Test Method
Continuous Use Temperature	125	°C	UL 1581
Brittleness Temperature	-49.0	°C	ASTM D746
RTI Elec	90.0	°C	UL 746
RTI	90.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	3.5E+16	ohms	ASTM D257
Volume Resistivity	2.2E+16	ohms · cm	ASTM D257
Dielectric Constant			ASTM D150
25°C, 60 Hz	2.34		ASTM D150
25°C, 1 kHz	2.80		ASTM D150
25°C, 1 MHz	2.30		ASTM D150
Dissipation Factor			ASTM D150
25°C, 60 Hz	2.0E-3		ASTM D150
25°C, 1 kHz	2.0E-3		ASTM D150
25°C, 1 MHz	5.0E-3		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.50 mm, Natural Color	HB		UL 94
3.00 mm, Natural Color	V-1		UL 94
Oxygen Index	25	%	ASTM D2863

Additional Information		
EM 60 at 75C (167F): 1 day SIC(80V/mil)=2.50, % change in SIC, 1 to 14 days=4.07, Stability factor, 14 days=0.97, Power factor, 14 days=1.23		
Injection	Nominal Value	Unit
Rear Temperature	199 - 216	°C
Middle Temperature	213 - 221	°C
Front Temperature	221 - 227	°C
Nozzle Temperature	221 - 229	°C
Processing (Melt) Temp	221 - 229	°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
Injection instructions		
无需干燥.但如果湿度过大,则将粒料在150°F (65°C)的温度下干燥2-4小时.		
Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	193 - 210	°C
Cylinder Zone 2 Temp.	199 - 216	°C
Cylinder Zone 3 Temp.	213 - 221	°C
Cylinder Zone 5 Temp.	221 - 227	°C
Die Temperature	221 - 229	°C
Extrusion instructions		
螺杆转速30 - 100 rpm		
NOTE		
1.	168HR, mg/sq in	

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