

Elexar® EL-1402T

Thermoplastic Elastomer

Teknor Apex Company

Message:

RoHS compliant halogen free flame retardant TPE

General Information			
Features	Halogen-free		
Uses	Cable sheath		
	Wire and cable applications		
	Wire sheath		
	Connector		
	cord sheath		
	Terminal cable sheath material		
RoHS Compliance	RoHS compliance		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.11	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	2.0	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 5 sec)	87		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Strength (Break)	10.3	MPa	ASTM D412
Tensile Elongation (Break)	650	%	ASTM D412
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air			ASTM D573
136°C, 168 hr	0.0	%	ASTM D573
158°C, 168 hr	3.0	%	ASTM D573
Change in Ultimate Elongation in Air			ASTM D573
136°C, 168 hr	-5.0	%	ASTM D573
158°C, 168 hr	-4.0	%	ASTM D573
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -52.0	°C	ASTM D746
Electrical	Nominal Value	Unit	Test Method
Dielectric Constant			ASTM D2520

1 kHz	3.04	ASTM D2520
1 MHz	3.54	ASTM D2520
Dissipation Factor		ASTM D150
1 kHz	0.016	ASTM D150
1 MHz	0.079	ASTM D150

Flammability	Nominal Value	Unit	Test Method
Flame Rating (3.18 mm)	V-0		UL 94
Oxygen Index	28	%	ASTM D2863

Injection	Nominal Value	Unit
Rear Temperature	171 - 177	°C
Middle Temperature	177 - 182	°C
Front Temperature	182 - 188	°C
Nozzle Temperature	188 - 193	°C
Processing (Melt) Temp	188 - 193	°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

Drying is not necessary. However, if moisture is a problem, dry the pellets for 1 to 2 hours at 176°F (80°C).

Extrusion	Nominal Value	Unit
Drying Temperature	80.0	°C
Drying Time	1.0 - 2.0	hr
Cylinder Zone 1 Temp.	171 - 177	°C
Cylinder Zone 2 Temp.	177 - 182	°C
Cylinder Zone 3 Temp.	182 - 188	°C
Cylinder Zone 4 Temp.	188 - 193	°C
Cylinder Zone 5 Temp.	188 - 193	°C
Melt Temperature	193 - 196	°C
Die Temperature	121 - 177	°C

Extrusion instructions

Screw Speed: 30 to 100 rpm

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