# Elexar® EL-8732R

Thermoplastic Elastomer

Teknor Apex Company

## Message:

Elexar EL-8732R is a high performance, flame retardant thermoplastic elastomer designed for electrical applications requiring flexibility over a wide termperture range. Elexar EL-8732R is a high durometer grade that is UV stablized and RoHS compliant. This grade is UL listed and is suitable for both injection molding and extrusion.

| General Information | |
|---|---|
| Features | High elasticity |
| | High tensile strength |
| | Good UV resistance |
| | Good heat aging resistance |
| | Good flexibility |
| | Good coloring |
| | Medium liquidity |
| | Halogenated |
| | Ozone resistance |
| | Good weather resistance |
| | Sunlight resistance, 720 hours |
| | 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 |
| Agency Ratings | UL 1581 |
| RoHS Compliance | RoHS compliance |
| UL File Number | QMTT2.E73402 |
| Forms | Particle |
| Processing Method | Extrusion |
| | Injection molding |

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Specific Gravity | 1.18 | g/cm³ | ASTM D792 |
| Melt Mass-Flow Rate (MFR) | 10 | g/10 min | ASTM D1238 |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Durometer Hardness (Shore A) | 81 | | ASTM D2240 |
| **Elastomers** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Stress [1] | | | ASTM D412 |
| 100% strain, 0.508mm [2] | 3.24 | MPa | ASTM D412 |
| 300% strain, 0.508mm [3] | 4.76 | MPa | ASTM D412 |
| Tensile Strength (Yield, 0.508 mm) | 12.1 | MPa | ASTM D412 |
| Tensile Elongation (fracture, 0.508mm) | 650 | % | ASTM D412 |
| **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) | -7.0 | % | ASTM D573 |
| Change in Tensile Strength (60°C, 168 hr, in IRM 902 Oil) | -4.0 | % | ASTM D471 |
| Change in Ultimate Elongation (60°C, 168 hr, in IRM 902 Oil) | 2.0 | % | ASTM D471 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Continuous Use Temperature | 105 | °C | UL 1581 |
| Brittleness Temperature | -60.0 | °C | ASTM D746 |
| RTI Elec | 50.0 | °C | UL 746 |
| RTI Imp | 50.0 | °C | UL 746 |
| RTI | 50.0 | °C | UL 746 |
| **Electrical** | **Nominal Value** | **Unit** | **Test Method** |
| Volume Resistivity | | | ASTM D257 |
| 23°C | 1.4E+16 | ohms·cm | ASTM D257 |
| 50°C | 6.5E+14 | ohms·cm | ASTM D257 |
| Dielectric Strength | 25 | kV/mm | ASTM D149 |
| Dielectric Constant (1 kHz) | 2.40 | | ASTM D150 |
| **Flammability** | **Nominal Value** | **Unit** | **Test Method** |
| Flame Rating (3.00 mm) | V-2 | | UL 94 |
| Oxygen Index | 23 | % | ASTM D2863 |
| **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 |
|---|
| Drying is not necessary. However, if moisture is a problem, dry the pellets for 2 to 4 hours at 150°F (65°C). |

| 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 |
|---|
| 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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