

Teknor Apex Telcar® TL-8451 Thermoplastic Elastomer

Category : Polymer , Thermoplastic , Elastomer, TPE , Vinyl (PVC) , PVC, Wire and Cable Grade

Material Notes:

Notes: RoHS Compliant Uses: Appliance Wire Insulation; Appliance Wire Jacketing; Cable Jacketing; Connectors; Flexible Cord Jacketing; Industrial Cable Jacketing; Terminal Cable Jacketing; Underground Power Cable; Wire and Cable Applications; Wire Jacketing Wire Types: SJEOW Agency Ratings: UL 1581; QMTT2.E73402 Forms: Pellets Processing Method: Extrusion; Injection Molding Injection Notes: Drying is not necessary. However, if moisture is a problem, dry the pellets for 2 to 4 hours at 150°F (65°C); Injection Rate: Moderate-Fast Extrusion
Notes: Screw Speed: 30 to 100 rpm Information Provided by Teknor Apex

Order this product through the following link:

http://www.lookpolymers.com/polymer_Teknor-Apex-Telcar-TL-8451-Thermoplastic-Elastomer.php

| Physical Properties | Metric | English | Comments |
|---------------------|--------------------------------------|--------------------------------------|------------|
| Specific Gravity | 1.00 g/cc | 1.00 g/cc | ASTM D792 |
| Melt Flow | 19.0 g/10 min | 19.0 g/10 min | ASTM D1238 |
| | @Load 5.00 kg, Temperature 200 °C | @Load 11.0 lb, Temperature 392 °F | |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|-----------|----------|---|
| Hardness, Shore A | 82 | 82 | ASTM D2240 |
| Tensile Strength at Break | 14.23 MPa | 2064 psi | Change in tensile strength in IRM 902 oil after 168 hours at 140°F; ASTM D471 |
| | 16.5 MPa | 2400 psi | ASTM D412 |
| | 18.2 MPa | 2640 psi | Change in tensile strength in air after 168 hours at 277°F; ASTM D573 |
| Elongation at Break | 534 % | 534 % | Change in tensile elongation in air after 168 hours at 277°F; ASTM D573 |
| | 558 % | 558 % | Change in tensile elongation in IRM 902 oil after 168 hours at 140°F; ASTM D471 |
| | 600 % | 600 % | ASTM D412 |

| Thermal Properties | Metric | English | Comments |
|----------------------------------|-------------|-------------|----------------|
| Maximum Service Temperature, Air | 105 °C | 221 °F | Continuous Use |
| Brittleness Temperature | <= -60.0 °C | <= -76.0 °F | ASTM D746 |
| Oxygen Index | 18 % | 18 % | ASTM D2863 |

| Electrical Properties | Metric | English | Comments |
|-----------------------|-----------------------|-----------------------|-----------|
| Dielectric Constant | 2.1 | 2.1 | ASTM D150 |
| | @Frequency 1000 Hz | @Frequency 1000 Hz | |
| | 2.33 | 2.33 | ASTM D150 |
| | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz | |
| Dissipation Factor | 0.00010 | 0.00010 | ASTM D150 |
| | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz | |
| | 0.00020 | 0.00020 | ASTM D150 |
| | @Frequency 1000 Hz | @Frequency 1000 Hz | |

| Processing Properties | Metric | English | Comments |
|---------------------------|-------------------|-----------------|------------------------|
| Rear Barrel Temperature | 199 - 216 °C | 390 - 420 °F | |
| Middle Barrel Temperature | 213 - 221 °C | 415 - 430 °F | |
| Front Barrel Temperature | 221 - 227 °C | 430 - 440 °F | |
| Nozzle Temperature | 221 - 229 °C | 430 - 445 °F | |
| Zone 1 | 193 - 210 °C | 380 - 410 °F | |
| Zone 2 | 199 - 216 °C | 390 - 420 °F | |
| Zone 3 | 213 - 221 °C | 415 - 430 °F | |
| Zone 5 | 221 - 227 °C | 430 - 440 °F | |
| Die Temperature | 221 - 229 °C | 430 - 445 °F | |
| Melt Temperature | 221 - 229 °C | 430 - 445 °F | Processing Temperature |
| Mold Temperature | 25.0 - 65.6 °C | 77.0 - 150 °F | |
| Injection Pressure | 1.38 - 6.89 MPa | 200 - 1000 psi | |
| Back Pressure | 0.172 - 0.345 MPa | 25.0 - 50.0 psi | |
| Cushion | 0.381 - 2.54 cm | 0.150 - 1.00 in | |
| Screw Speed | 50 - 100 rpm | 50 - 100 rpm | |

| Descriptive Properties | Value | Comments |
|------------------------|--------|----------|
| Appearance | Opaque | |

| Descriptive Properties | Value | Comments |
|------------------------|-------|----------|
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