



# AUTOMOTIVE

Inventing *the Future* of Wire and Cable

## EXRAD 150 UT ISO 6722 Thin Wall Powertrain Wire -55 - 150°C

EXRAD 150 UT is a high performance wire which meets the requirements of ISO 6722 150°C thin wall wire. It is an irradiation cross-linked polyolefin with impressive properties. EXRAD 150UT is rated at 150°C, but it survives temperatures to 240°C and higher for short periods of time. It is safer in overload conditions because it will not melt.

EXRAD 150 UT creates opportunities to eliminate unnecessary and expensive convolute tubing, tapes and heat shields that protect inferior wire systems. 150 UT meets or exceeds the ISO 6722 standards that are commonly used in Europe and now in use, in North American vehicles.

EXRAD150 UT processes very well on automated high speed cut and strip equipment. The end result is an automotive wire ideally suited to applications where heat protection, long life and less expensive wiring harnesses are required.

### Benefits and Features

Excellent sand paper and scrape abrasion Resistance

-55°C to 150°C Temperature Range

Superior Cut and Strip Processing

Meets Requirements of:

Ford ES-AU5T-1A348-AA

GM GMW15626

Volvo T-4

### Applications

Including but not limited to:

Under-hood

Coil on plug

Sensors

Locations near exhaust manifolds or other high temperature areas

| Part Number  | Standard Conductors Bare Copper | Nom. Dia of Conductor mm | Insulation Thickness mm | Nom. OD mm   | Finished Weight (kg/100m) |
|--------------|---------------------------------|--------------------------|-------------------------|--------------|---------------------------|
| EXAR-UT-0.50 | 0.50mm <sup>2</sup> 19/.18mm    | 0.89                     | 0.28                    | 1.5 +/- .1   | 0.7                       |
| EXAR-UT-0.75 | 0.75mm <sup>2</sup> 19/.22mm    | 1.08                     | 0.30                    | 1.8 +/- .1   | 0.9                       |
| EXAR-UT-1.00 | 1.00mm <sup>2</sup> 19/.25mm    | 1.22                     | 0.30                    | 2.0 +/- .1   | 1.1                       |
| EXAR-UT-1.50 | 1.50mm <sup>2</sup> 19/.32mm    | 1.57                     | 0.30                    | 2.3 +/- .1   | 1.6                       |
| EXAR-UT-2.50 | 2.50mm <sup>2</sup> 37/.29mm    | 1.98                     | 0.35                    | 2.85 +/- .15 | 2.6                       |
| EXAR-UT-4.00 | 4.00mm <sup>2</sup> 37/.37mm    | 2.50                     | 0.40                    | 3.55 +/- .15 | 4.1                       |

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| ISO 6722 |                                  | EXRAD 150 UT   |  |
|----------|----------------------------------|--|--|
| Section  | Description                      | Requirement  | Typical Results (0.75mm <sup>2</sup> Sample) |
| 6.4      | Insulation Volume Resistivity    | 10 <sup>9</sup> Ω /mm min.   | 6.43 10 <sup>18</sup> Ω /mm, Pass            |
| 7.1      | Pressure at High Temperature     | '0.8N @150°C no dielectric breakdown   | no breakdown Pass                            |
| 7.2      | Strip Force / Adhesion           | Per customer agreement   | 35N Pass                                     |
| 8.1      | Low Temperature Winding          | 3 tns 2.5kg - 40°C no dielectric breakdown   | no dielectric breakdown, no cracking, Pass   |
| 8.2      | Impact                           | 100gm @-40°C no breakdown  | no breakdown, Pass                           |
| 9.2      | Sandpaper Abrasion               | .2kg 350mm min   | 730mm, Pass                                  |
| 9.3      | Scrape Abrasion                  | Per customer agreement   | 2430, Pass                                   |
| 10.1     | Long-Term Heat Aging             | 150°C 3000 hours   | no breakdown, no cracks Pass                 |
| 10.3     | Thermal Overload                 | 200°C 6 hours  | no breakdown, no cracks, Pass                |
| 10.4     | Shrinkage by heat                | 2mm max. 150°C   | no shrinkage, Pass                           |
| 11.2     | Fluid Compatibility              |  |  |
|          |                                  | Gasoline 15% max.  | 1% Pass                                      |
|          |                                  | Diesel Fuel 15% max.   | 3% Pass                                      |
|          |                                  | Engine Oil 15% max.  | 2% Pass                                      |
|          |                                  | Ethanol 15% max.   | 3% Pass                                      |
|          |                                  | Power Steering 30% max   | 1% Pass                                      |
|          |                                  | Automatic Transmission 25% max.  | 2% Pass                                      |
|          |                                  | Engine Coolant 15% max   | 1% Pass                                      |
|          |                                  | Battery Acid no breakdown  | no breakdown, Pass                           |
| 11.4     | Ozone Resistance                 | 45°C 85% Relative Humidity 70 hours, Ozone 50 +/- 5 pphm 1kV 1 min. (no breakdown) | no breakdown, Pass                           |
| 11.5     | Resistance to hot water          | not less than 10-5 ohm-mm  | 5.35 X10 <sup>14</sup> ohm-mm Pass           |
| 11.7     | Temperature and Humidity Cycling | 40 - 8 hours cycles -40°C and 125°C 80 -100% relative humidity                     | no dielectric breakdown, no cracking, Pass   |
| 12       | Resistance to Flame Propagation  | 70 sec. max. 50mm unburned   | 8 sec. after burn, Pass                      |

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