



## HIGH TEMPERATURE MICA WIRE

# Engineered for Extreme Heat

Premium high-temperature mica insulated wires designed to withstand continuous operation from 450°C to 750°C. Built with nickel conductors, mica tape insulation, and fiberglass braid jackets for the most demanding thermal environments.



### 450°C

CONTINUOUS  
RATING

### 750°C

CONTINUOUS  
RATING

### 600V / 300V

VOLTAGE RATINGS



**Caledonian**

Caledonian Cables Limited

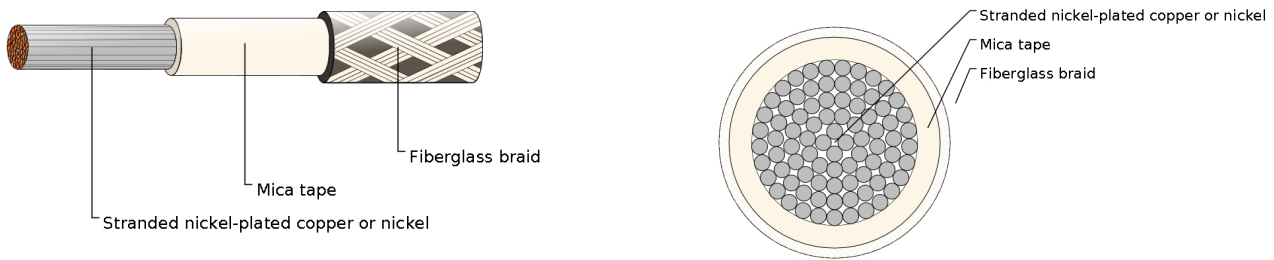
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# 450°C 600V High Temperature Wire

High Temperature Fiberglass Wire • Mica Insulated

## APPLICATION

**Widely used in steel mills, foundries, and heat-treating furnaces** where ambient temperatures exceed conventional cable limits. Ideal for internal wiring of industrial ovens, kilns, glass manufacturing equipment, and high-temperature lighting systems. Also suited for wiring in chemical processing plants, ceramic production lines, and power generation facilities where sustained 450°C heat resistance is critical to operational safety and circuit integrity.



## CONSTRUCTION

**Conductor** Stranded nickel-plated copper or nickel

**Insulation** Mica tape

**Jacket** Fiberglass braid with high-temperature finish

**Rated Voltage** 600 V

**Rated Temperature** 450°C

**Color** Tan Red White Yellow Green Brown Black Blue

— PARAMETER

| Size (mm²) | Conductor Structure | Insulation (mm) | Jacket (mm) | Approx. O.D. (mm) |
|------------|---------------------|-----------------|-------------|-------------------|
| 0.14       | 7/0.16              | 0.45            | 0.20        | 1.8               |
| 0.22       | 7/0.20              | 0.45            | 0.20        | 1.9               |
| 0.25       | 7/0.23              | 0.45            | 0.20        | 2.0               |
| 0.50       | 16/0.20             | 0.45            | 0.20        | 2.2               |
| 0.75       | 24/0.20             | 0.45            | 0.20        | 2.4               |
| 1.0        | 32/0.20             | 0.45            | 0.20        | 2.6               |
| 1.5        | 30/0.25             | 0.45            | 0.20        | 2.9               |
| 2.0        | 40/0.25             | 0.45            | 0.20        | 3.1               |
| 2.5        | 50/0.25             | 0.45            | 0.20        | 3.3               |
| 4.0        | 56/0.30             | 0.45            | 0.20        | 3.9               |
| 6.0        | 84/0.30             | 0.69            | 0.25        | 5.1               |
| 10.0       | 140/0.30            | 0.69            | 0.25        | 6.4               |
| 16.0       | 224/0.30            | 0.69            | 0.25        | 7.6               |
| 25.0       | 350/0.30            | 0.69            | 0.25        | 9.0               |



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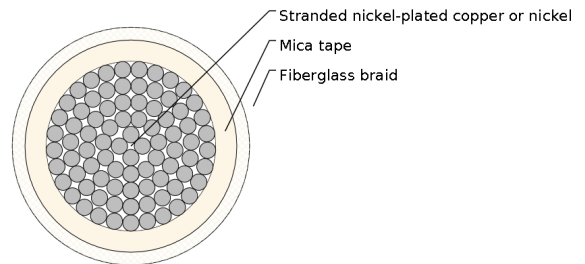
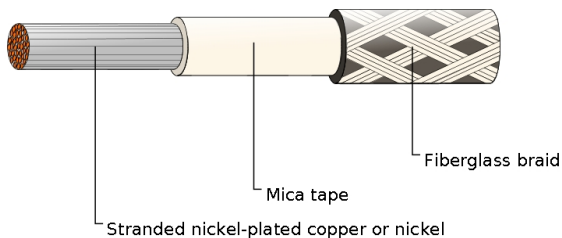
## 450°C 300V High Temperature Wire

High Temperature Fiberglass Wire • Mica Insulated

### APPLICATION

**Designed for low-voltage instrumentation and control circuits in high-temperature zones.**

Commonly applied in appliance internal wiring, heating element connections, thermal sensor leads, and signal circuits within industrial furnaces and kilns. Well-suited for equipment where a 300V rating is sufficient but 450°C thermal endurance is essential — including laboratory furnaces, food processing ovens, textile machinery, and packaging equipment operating at elevated temperatures.



### CONSTRUCTION

**Conductor** Stranded nickel-plated copper or nickel

**Insulation** Mica tape

**Jacket** Fiberglass braid with high-temperature finish

**Rated Voltage** 300 V

**Rated Temperature** 450°C

**Color** Tan Red White Yellow Green Brown Black Blue

— PARAMETER

| Size (mm²) | Conductor Structure | Insulation (mm) | Jacket (mm) | Approx. O.D. (mm) |
|------------|---------------------|-----------------|-------------|-------------------|
| 0.14       | 7/0.16              | 0.31            | 0.20        | 1.5 ± 0.1         |
| 0.22       | 7/0.20              | 0.31            | 0.20        | 1.6 ± 0.1         |
| 0.25       | 7/0.23              | 0.31            | 0.20        | 1.7 ± 0.1         |
| 0.50       | 16/0.20             | 0.31            | 0.20        | 1.9 ± 0.1         |
| 0.75       | 24/0.20             | 0.31            | 0.20        | 2.2 ± 0.1         |
| 1.0        | 32/0.20             | 0.31            | 0.20        | 2.3 ± 0.1         |
| 1.5        | 30/0.25             | 0.31            | 0.20        | 2.6 ± 0.1         |
| 2.0        | 40/0.25             | 0.31            | 0.20        | 2.9 ± 0.2         |
| 2.5        | 50/0.25             | 0.31            | 0.20        | 3.1 ± 0.2         |
| 4.0        | 56/0.30             | 0.31            | 0.20        | 3.6 ± 0.2         |
| 6.0        | 84/0.30             | 0.41            | 0.25        | 4.5 ± 0.3         |
| 10.0       | 140/0.30            | 0.41            | 0.25        | 5.8 ± 0.3         |
| 16.0       | 224/0.30            | 0.51            | 0.25        | 7.2 ± 0.5         |
| 25.0       | 350/0.30            | 0.51            | 0.25        | 8.7 ± 0.5         |



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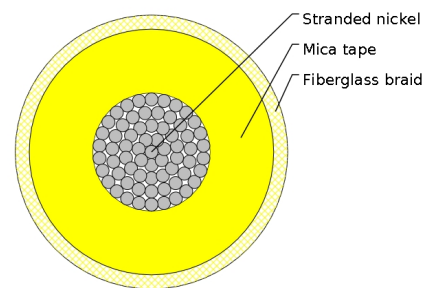
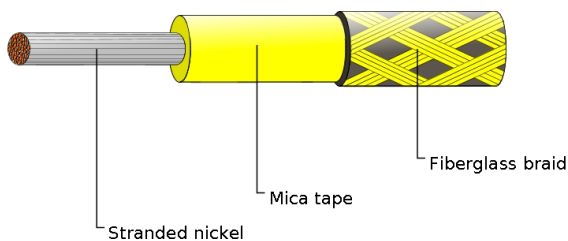
## 750°C 600V High Temperature Wire

High Temperature Mica Wire • Nickel Conductor

### APPLICATION

**Engineered for the most extreme thermal environments where conventional wires fail.**

Essential for metallurgical processing, aluminum smelting, glass tank furnace wiring, cement plant preheaters, and incinerator instrumentation. Also deployed in aerospace engine test cells, nuclear reactor containment zones, and emergency safety circuits that must maintain integrity during catastrophic heat events. The pure nickel conductor ensures stable electrical performance at temperatures that would degrade copper-based alternatives.



### CONSTRUCTION

**Conductor** Stranded nickel-plated copper or nickel

**Insulation** Mica tape

**Jacket** Fiberglass braid with high-temperature finish

**Rated Voltage** 600 V

**Rated Temperature** 750°C

**Color** Tan Red White Yellow Green Brown Black Blue

— PARAMETER

| Size (AWG) | Conductor Structure | Insulation (mm) | Jacket (mm) | Approx. O.D. (mm) |
|------------|---------------------|-----------------|-------------|-------------------|
| 18         | 17/0.25             | 1.13            | 0.25        | 4.0               |
| 16         | 27/0.25             | 1.13            | 0.25        | 4.3               |
| 14         | 42/0.25             | 1.13            | 0.25        | 4.6               |
| 12         | 67/0.25             | 1.13            | 0.25        | 5.2               |
| 10         | 106/0.25            | 1.13            | 0.25        | 6.0               |
| 8          | 168/0.25            | 1.35            | 0.25        | 7.3               |



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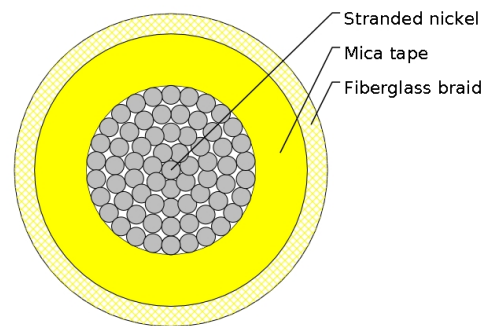
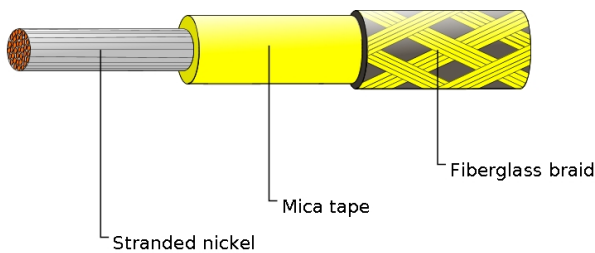
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## 750°C 300V High Temperature Wire

High Temperature Mica Wire • Nickel Conductor

### APPLICATION

**Optimized for low-voltage signal and instrumentation circuits in extreme-heat zones.** Used for thermocouple extension wiring, sensor connections, and control circuits inside furnaces, smelters, and incinerators where a 300V rating is sufficient but 750°C endurance is mandatory. Ideal for glass furnace instrumentation, steel mill sensor arrays, ceramic kiln monitoring, and aerospace ground-test equipment where compact high-temperature wiring is required for reliable data transmission under sustained extreme thermal loads.



### CONSTRUCTION

**Conductor** Stranded nickel-plated copper or nickel

**Insulation** Mica tape

**Jacket** Fiberglass braid with high-temperature finish

**Rated Voltage** 300 V

**Rated Temperature** 750°C

**Color** ● Tan ● Red ● White ● Yellow ● Green ● Brown ● Black ● Blue

— PARAMETER

| Size (AWG) | Conductor Structure | Insulation (mm) | Jacket (mm) | Approx. O.D. (mm) |
|------------|---------------------|-----------------|-------------|-------------------|
| 18         | 17/0.25             | 0.64            | 0.25        | 3.0               |
| 16         | 27/0.25             | 0.64            | 0.25        | 3.3               |
| 14         | 42/0.25             | 0.64            | 0.25        | 3.7               |
| 12         | 67/0.25             | 0.64            | 0.25        | 4.2               |
| 10         | 106/0.25            | 0.76            | 0.25        | 5.3               |
| 8          | 168/0.25            | 0.76            | 0.25        | 6.1               |



**Caledonian**

Caledonian Cables Limited is a professional global manufacturer of a wide range of cables, with particular expertise in custom-designed solutions for clients.

#### CONTACT

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