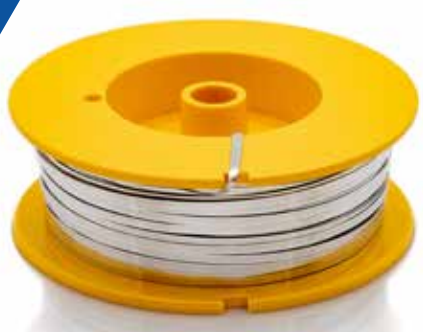
# ALUMINUM RIBBON

## TECHNICAL DATASHEET



## COINING's Aluminum Ribbon

COINING offers SPM-Power-Bond-Ribbon™ which is typically used in microwave and high-power applications.

Our SPM-Power-Bond-Ribbon™ is high-purity and corrosion-resistant. Our in-house drawing, rolling, annealing and analytic capabilities ensure we deliver homogeneous high-purity ribbon with ultra-clean surfaces and smooth finish.

## Advantages of Aluminum Ribbon:

- SPM-Power-Bond-Ribbon™ eliminates the need for multiple wire bonds
- For a given nominal current, multiple wire bonds can be replaced with one properly selected ribbon bond. {One singular 40x4 mil ribbon can replace eight 5 mil Al wires.}
- Ribbon offers better electrical characteristics
- Improved heat dissipation
- Fewer bonds
- Increased reliability over wire

## When to choose Aluminum Ribbon

Our Aluminum Ribbon has excellent electrical characteristics, improved heat dissipation, fewer bonds, as well as improved throughput and increased reliability. Aluminum Ribbon is low cost compared to other metals.

| Physical Properties | |
|---|---|
| Density: | 2.7 g/cm$^3$ |
| Melting Point: | 660°C |
| Electrical Resistivity: (@20°C) | 2.7x10$^{-8}$ Ω-m |
| Electrical Conductivity: (@20°C) | 75% (IACS) |
| Thermal Conductivity: (@20°C) | 230 W/(mK) |

| Material Specification | |
|---|---|
| 99.999% Aluminum: | Al - 99.998% min.; Ni < 2 ppm; Cu, Mg, Si, Fe < 5 ppm |
| 99.99% Aluminum + Ni: | Al – 99.99%; Ni – 47-53 ppm; Cu, Mg < 20 ppm; Si, Fe < 10 ppm |
| Other Alloy Compositions: | COINING also offers Al-Si, Al-Cu and Al-Mg wire |

COINING™ / AMETEK® COMPONENTS AND WIRE

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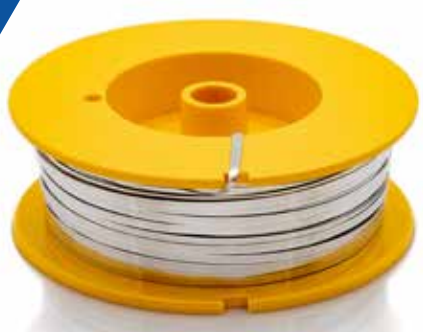

### Aluminum Ribbon Mechanical Properties*

| Composition | Dimensions (mils) | Tensile Strength (gm) | Elongation (%) |
|---|---|---|---|
| 99.99% Aluminum + 50 ppm Ni | 30 x 3 | 250 – 350 | 15 – 25 |
| | 40 x 4 | 400 – 550 | 10 – 30 |
| | 50 x 5 | 1000 – 1500 | 20 – 35 |
| | 40 x 6 | 700 – 1100 | 20 – 35 |
| | 60 x 6 | 1300 – 1700 | 20 – 35 |
| | 80 x 6 | 1800 – 2200 | 20 – 35 |
| | 50 x 8 | 1500 – 2000 | 20 – 35 |
| | 60 x 8 | 2000 – 2500 | 20 – 35 |
| | 80 x 8 | 2300 – 2800 | 20 – 35 |
| | 60 x 10 | 2200 – 2600 | 25 – 40 |
| | 80 x 10 | 2700 – 3400 | 25 – 40 |

* Typical specifications

### Contact Us

**Ask An Engineer** a technical question, by simply scanning the QR code and drop us a line.

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COINING™ / AMETEK® COMPONENTS AND WIRE