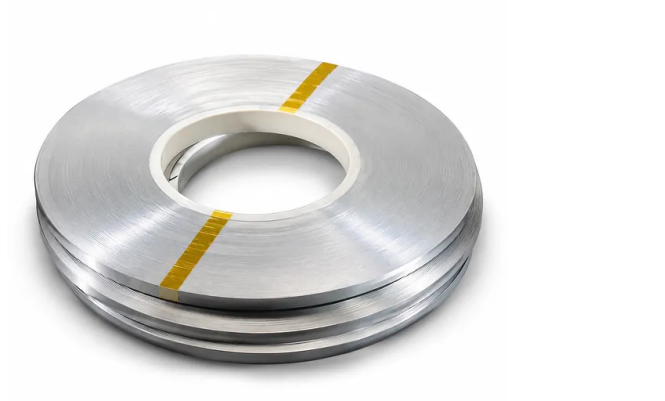


# Customizable Width High Precision Aluminum Strip For Battery Fabrication And Advanced Materials Research

Item Number: FZ39



## Introduction

Engineered for battery fabrication and advanced research, this precision aluminum strip with customizable width delivers strict dimensional tolerances, versatile temper selections, compliant chemical purity, and superior bending performance to ensure seamless processing across demanding laboratory and industrial manufacturing lines.

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| Application                          | Description                                                                                                            | Key Benefit                                                                                                       |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Lithium-Ion Battery Cathode Tabs     | Functioning as positive terminal current lead tabs in pouch and prismatic battery cells.                               | Excellent electrical conductivity and defect-free ultrasonic weldability to aluminum current collector foils.     |
| Supercapacitor Terminal Leads        | Interconnecting electrode stacks in high-power electric double-layer capacitors (EDLC).                                | Low internal equivalent series resistance (ESR) and high mechanical endurance during high-rate cycling.           |
| Precision Calendering & Coating R&D  | Serving as standardized substrate strip for thin-film slurry coating and roll pressing trials in battery laboratories. | Exceptional thickness uniformity and surface cleanliness ensure reproducible active material layer deposition.    |
| Electronic Component Shielding       | Acting as lightweight electromagnetic interference (EMI) and radio-frequency shielding ribbon in electronics.          | High purity aluminum provides continuous conductivity and flexible conformability around intricate geometries.    |
| Transformer & Inductor Foil Windings | Replacing traditional magnet wire in high-frequency power transformers and compact electrical inductors.               | Superior packing factor, reduced skin effect losses, and high thermal dissipation in compact electronic designs.  |
| Flexible Interconnects & Busbars     | Providing low-profile, flexible bridge conductors across multi-cell modular battery packs.                             | High fatigue resistance during repeated 180° bending avoids work-hardening fracture during pack expansion cycles. |

| Parameter                     | Value / Compliance                                      |
|-------------------------------|---------------------------------------------------------|
| Base Product Identifier       | FZ39 Series                                             |
| Material Type                 | High-Purity Industrial Aluminum Strip                   |
| Chemical Composition Standard | GB/T 3190-1996                                          |
| Available Delivery Form       | Precision Slit Coil / Spool / Reel (Width Customizable) |

| Thickness Nominal Range (T, mm) | Thickness Tolerance: High Precision Grade (± mm) | Thickness Tolerance: Standard Grade (± mm) | Width Tolerance: 2≤W<10 mm (± mm) | Width Tolerance: 10≤W<50 mm (± mm) | Width Tolerance: 50≤W<100 mm (± mm) | Width Tolerance: 100≤W<150 mm (± mm) | Width Tolerance: 150≤W<200 mm (± mm) | Width Tolerance: 200≤W (± mm) |
|---------------------------------|--------------------------------------------------|--------------------------------------------|-----------------------------------|------------------------------------|-------------------------------------|--------------------------------------|--------------------------------------|-------------------------------|
| 0.05 ≤ T < 0.1                  | 0.005                                            | 0.008                                      | 0.05                              | 0.10                               | 0.15                                | 0.20                                 | 0.30                                 | 0.50                          |
| 0.1 ≤ T < 0.2                   | 0.008                                            | 0.010                                      | 0.08                              | 0.10                               | 0.12                                | 0.15                                 | 0.30                                 | 0.50                          |
| 0.2 ≤ T < 0.3                   | 0.010                                            | 0.012                                      | 0.10                              | 0.15                               | 0.25                                | 0.50                                 | 0.80                                 | 1.00                          |
| 0.3 ≤ T < 0.4                   | 0.012                                            | 0.015                                      | 0.10                              | 0.15                               | 0.25                                | 0.50                                 | 0.80                                 | 1.00                          |

| Thickness<br>Nominal<br>Range (T,<br>mm) | Thickness<br>Tolerance: High<br>Precision Grade<br>(± mm) | Thickness<br>Tolerance: Standard Grade<br>(± mm) | Width<br>Tolerance:<br>2≤W<10 mm<br>(± mm) | Width<br>Tolerance:<br>10≤W<50 mm<br>(± mm) | Width<br>Tolerance:<br>50≤W<100 mm<br>(± mm) | WidthTolerance:<br>100≤W<150 mm<br>(± mm) | WidthTolerance:<br>150≤W<200 mm<br>(± mm) | Width<br>Tolerance:<br>200≤W (±<br>mm) |
|------------------------------------------|-----------------------------------------------------------|--------------------------------------------------|--------------------------------------------|---------------------------------------------|----------------------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------|
| 0.4 ≤ T < 0.5                            | 0.015                                                     | 0.025                                            | 0.10                                       | 0.15                                        | 0.25                                         | 0.50                                      | 0.80                                      | 1.00                                   |

| Width Category (W, mm) | Maximum Allowable Camber (mm/m) |
|------------------------|---------------------------------|
| 2 ≤ W < 10             | ≤ 1.0                           |
| 10 ≤ W < 50            | ≤ 3.0                           |
| 50 ≤ W < 100           | ≤ 3.0                           |
| 100 ≤ W < 150          | ≤ 5.0                           |
| 150 ≤ W < 200          | ≤ 5.0                           |
| 200 ≤ W                | ≤ 5.0                           |

| Series<br>Model Code | Temper<br>State | Nominal<br>Thickness (mm) | Tensile Strength<br>Rm (N/mm <sup>2</sup> ) | Minimum<br>Elongation A (%) | 180° Repeated Bending<br>(Min Cycles) | Bending Test<br>Requirement          | Vickers<br>Hardness (HV) |
|----------------------|-----------------|---------------------------|---------------------------------------------|-----------------------------|---------------------------------------|--------------------------------------|--------------------------|
| FZ39-O               | O               | 0.050 - 0.089             | 45 - 100                                    | ≥ 4                         | ≥ 8                                   | No cracks or<br>delamination at bend | < 25                     |
| FZ39-O               | O               | 0.090 - 0.139             | 50 - 100                                    | ≥ 6                         | ≥ 8                                   | No cracks or<br>delamination at bend | < 25                     |
| FZ39-O               | O               | 0.140 - 0.200             | 50 - 100                                    | ≥ 10                        | ≥ 8                                   | No cracks or<br>delamination at bend | < 25                     |
| FZ39-O               | O               | 0.210 - 0.300             | 60 - 100                                    | ≥ 13                        | ≥ 8                                   | No cracks or<br>delamination at bend | < 25                     |
| FZ39-H12/22          | H12, H22        | 0.050 - 0.300             | 80 - 120                                    | —                           | ≥ 6                                   | No cracks or<br>delamination at bend | 25 - 30                  |
| FZ39-H14/24          | H14, H24        | 0.050 - 0.300             | 95 - 135                                    | —                           | ≥ 4                                   | No cracks or<br>delamination at bend | 30 - 40                  |
| FZ39-H16/26          | H16, H26        | 0.050 - 0.300             | 110 - 150                                   | —                           | ≥ 3                                   | No cracks or<br>delamination at bend | 40 - 45                  |
| FZ39-H18             | H18             | 0.050 - 0.300             | ≥ 125                                       | —                           | ≥ 2                                   | No cracks or<br>delamination at bend | > 45                     |