

# NIPPON KINZOKU Have Developed FI (Fine Insulation) Finish for Insulating Stainless Steel -Meeting the Need for Miniaturization of Electronic Devices-

NIPPON KINZOKU CO., LTD. (TOKYO: 5491) (Headquarters: Minato-ku, Tokyo, President Yasushi Shimokawa) announced that we have developed "FI (Fine Insulation) Finish," a stainless steel with high surface insulation resistance.

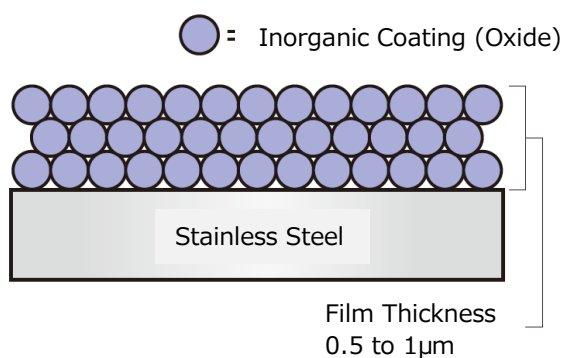
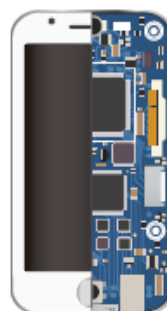
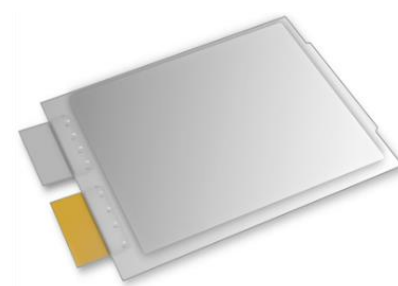


Image of FI finish



Electronic Device



Secondary Battery

Application examples

In recent years, there has been a remarkable trend towards smaller and lower profile electronic devices such as smartphones and game consoles. Until now, measures have been taken to prevent short circuits by applying insulating tape or a composite material with resin to points that come into contact with conductive parts, but this increases costs and hinders miniaturization and low-profile design.

In response to these challenges, we have independently developed an FI finish, in which the surface of stainless steel is pre-coated with an inorganic film (thickness approx. 1µm) that has insulating resistance (see image). Since FI finish does not require post-processing of surface treatment, it is a space-saving product that contributes to process elimination, productivity improvement, and cost reduction for you.

This is an our original product that meet new needs under the keyword of "Near Net Performance" (=products that achieve the performance required for the final product by materials) in line with the vision of the 11th business plan "NIPPON KINZOKU 2030". We aim to expand sales in the future for use in electronic devices and secondary batteries.

In addition, this is also an environmentally friendly product "eco-products" certified under our own standards, because customers no longer need to perform insulation processing,

which reduces the burden on the environment. Our goal is to achieve Net Zero CO<sub>2</sub> emissions by 2050, and we will contribute to the realization of carbon neutrality by expanding sales of our “eco-products”.

### Features of FI finish

1. This is a coating with high surface insulation resistance (50MΩ or more\*).  
\*Measure the resistance in the thickness direction with a digital multimeter
2. It has high heat resistance and can maintain a stable coating even at high temperatures (up to 850°C).
3. It is a hard inorganic coating, so it has excellent scratch resistance and is suitable for sliding parts.
4. The coating thickness is 0.5 to 1μm.
5. It is also possible to consider metals other than stainless steel.

### Specification

- 1) Steel Grades: SUS304, SUS301, SUS430, etc.
- 2) Thickness: 0.05 to 0.15mm
- 3) Width: Max. 500mm

\*Please contact us for specifications other than those listed above.

### About steel strip products

Our original designed equipment reflects our accumulated cold-rolling know-how, and our industry-leading proprietary technologies developed from these equipment meet all the needs of you.

URL: <https://www.nipponkinzoku.co.jp/en/corporate-profile/business/cold-rolled-stainless-steel-strip>

### About the vision of the 11th Business Plan “NIPPON KINZOKU 2030”

We have set our vision “Multi & Hybrid Material Company that creates new eco and human friendly values together ~By rolling and composite forming a wide variety of materials, we achieve the performance required for the final product and contribute to the future of people and the earth~” in our 11th Business Plan. With "Multi & Hybrid Material" (= utilizing a wide variety of materials to meet various needs), "Near Net Shape" (= achieving complex molding processes that are close to the final product shape), and "Near Net Performance" as key concepts, we are promoting future-oriented product development using our original technologies, and aiming to transform our business structure with a focus on new technologies and new products that meet new needs.

**Note:** This document has been translated from a part of the Japanese original for reference purposes only. In the event of any discrepancy between this translated document and the Japanese original, the original shall prevail.

\* \* \* Contact \* \* \*

Sales Development Dept.  
NIPPON KINZOKU CO., LTD.

E-mail: [nikkin-overseas@nipponkinzoku.co.jp](mailto:nikkin-overseas@nipponkinzoku.co.jp)  
<https://www.nipponkinzoku.co.jp/en/inquiry>