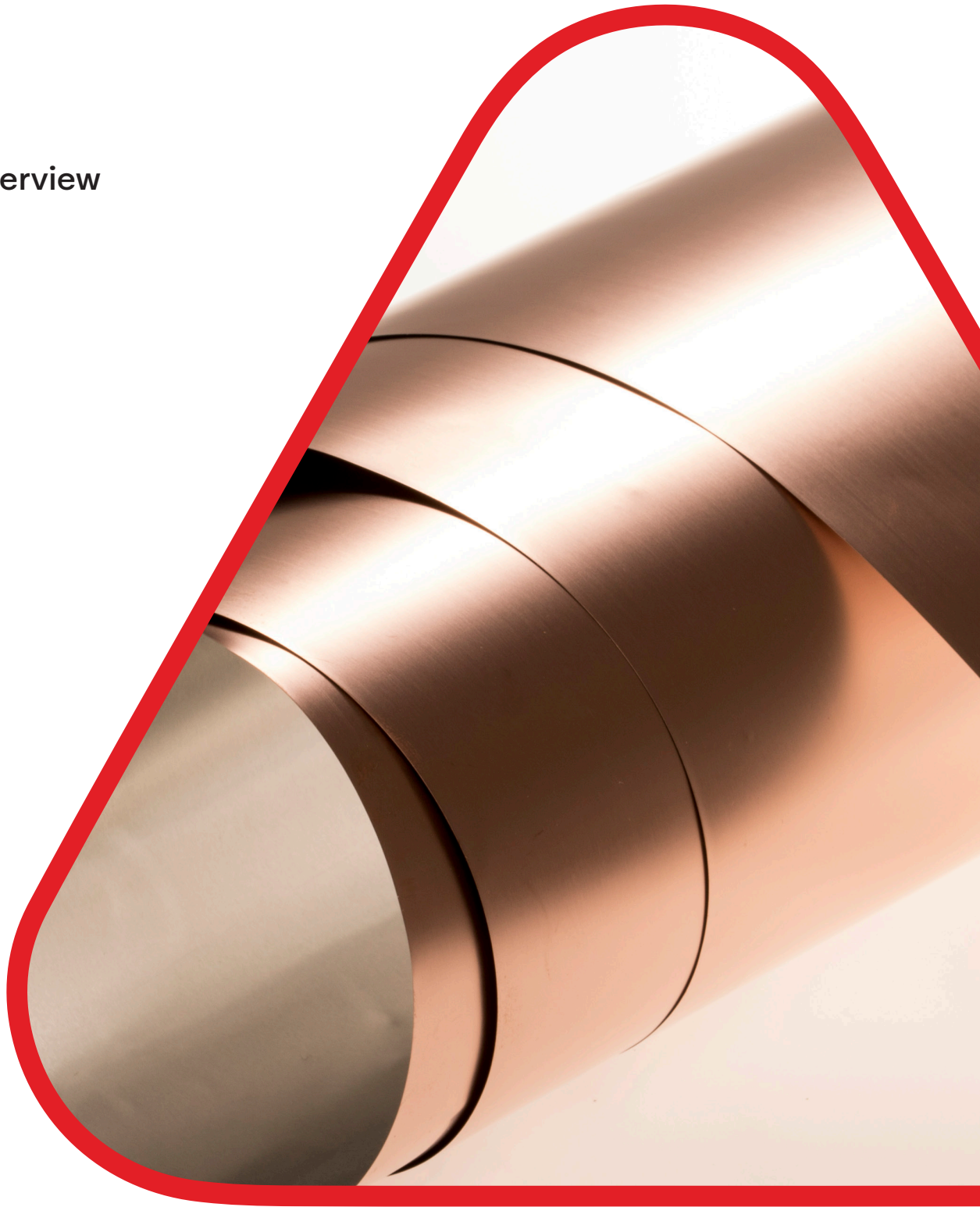


# Conductive Flexible Film

Preliminary  
Product Overview



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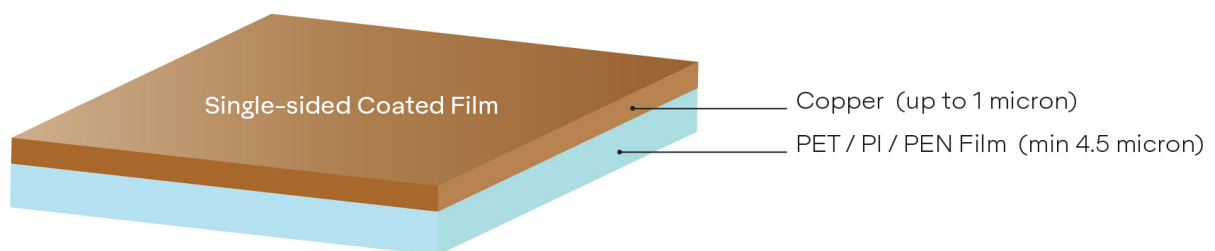
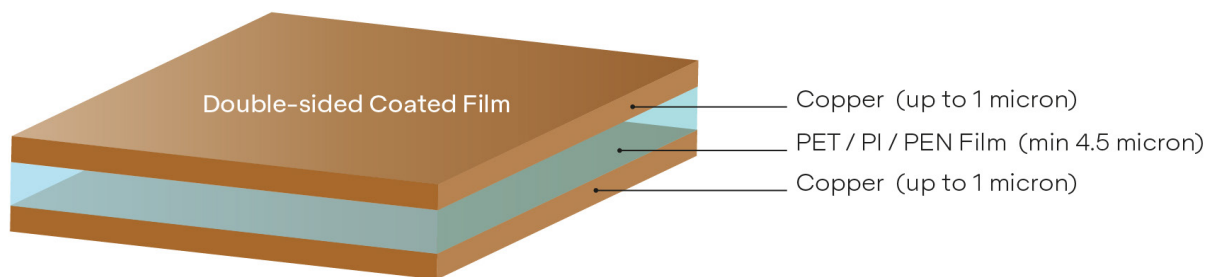
## Conductive Flexible Film on Ultra-Thin PET

Avery Dennison Hanita developed proprietary roll-to-roll processes to deposit pure Copper at a thickness range of 50nm - 1um on top of various flexible substrates, such as PET, PI, and PEN.

Substrate thickness can go down to 4.5um, enabling an ultra-thin design where space and thickness are limiting factors. For example, copper layers can be used in EV batteries, EMI shielding, and grounding tape applications. This process can produce a single or double-sided coated film.

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## Typical Structures



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## Applications

*Under Review*

- EV Batteries
- EMI Shielding
- Grounding Tapes

# Preliminary Product Data Overview

Under Development

Parameter	Value	Comments
Substrate	PET, PI, PEN, PC, Other	As long as it is available in roll form
Substrate Thickness Range	4.5-500um	Depending on availability from the supplier, it might change between different RMs; please consult with us
Resistivity Range	0.9ohm/sq - 21mohm/sq	Respectively to the copper thickness range below
Copper Thickness Range	50nm - 1um	
Anti-oxidation	No discolor after 140'C@15mins	
Appearance and Additional Properties		We can combine with various functional top coats to provide different colors, including black and/or other functionalities such as printability

# Features and Benefits

- **Design flexibility** - Choose any combination per application needs:
  - > Substrate thickness
  - > Substrate type
  - > Copper thickness (conductivity)
- **Optional ultra-thin design** - Substrate thickness down to 4.5um.
- Attractive cost due to highly efficient and innovative production process.
- **Combining with other functionalities** - We can offer additional functional top coats to provide different functionalities, such as appearance (e.g., colors), printability, etc.
- A relatively thick copper layer (1-2um thick) can provide EMI shielding for both high and low frequencies.

## About Avery Dennison

Avery Dennison Corporation (NYSE: AVY) is a global materials science company specializing in the design and manufacture of a wide variety of labeling and functional materials. The company's products and solutions, which are used in nearly every major industry, include pressure-sensitive materials for labels and graphic applications; tapes and other bonding solutions for industrial, medical, and retail applications; tags, labels and embellishments for apparel; and radio frequency identification (RFID) solutions serving retail apparel and other markets. The company employs approximately 36,000 employees in more than 50 countries. Reported sales in 2021 were \$8.4 billion. Learn more at [www.averydennison.com](http://www.averydennison.com).

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