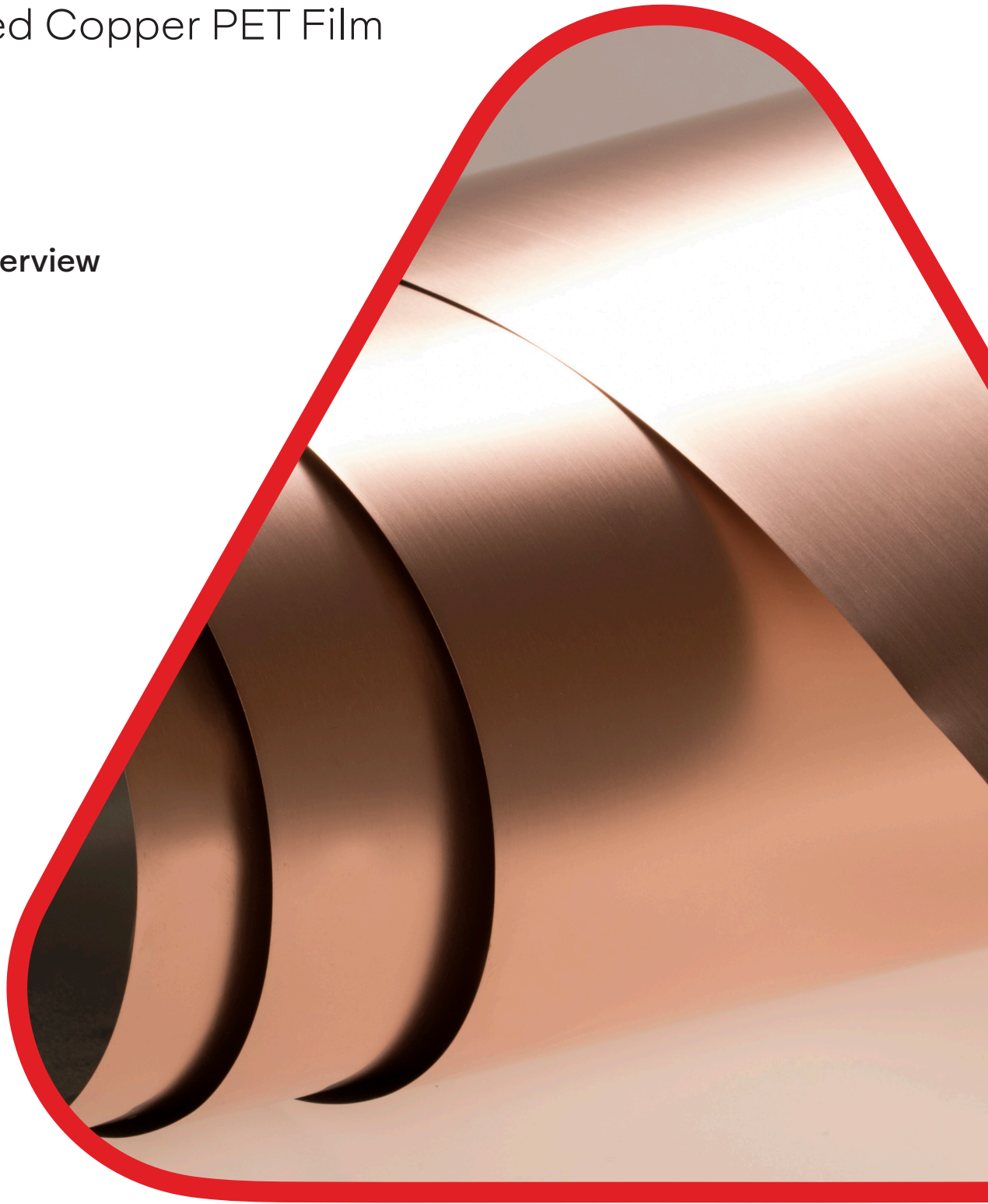


Li-ion Battery Current Collector Application

Metallized Copper PET Film

Preliminary
Product Overview

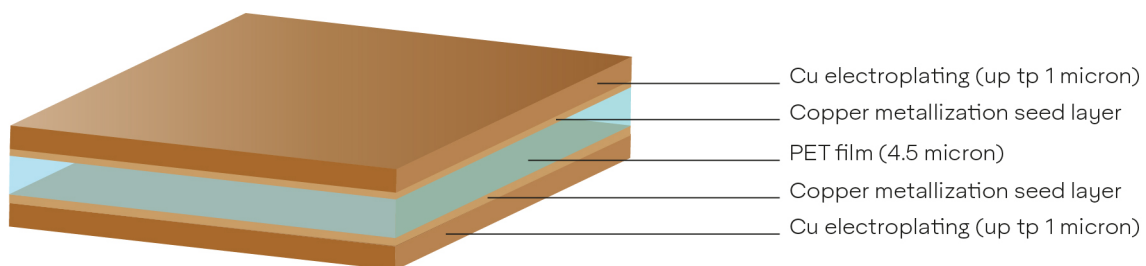


Metallized Current Collector for Li-ion Batteries

Copper foil is well established in the Li-ion battery industry, but cost, weight and safety constraints are driving the search for alternatives. Foils are relatively heavy, and typically increase the risk of thermal runaway - with the resulting risk of combustion.

Avery Dennison offers PET film with a highly conductive layer of metallized Copper coating to deliver high conductivity and serve as an Anode Current Collector. The film provides a cost-effective alternative to the Copper foil used in EV battery production, delivering a safer, easier-to-process and lighter-weight solution that may increase drive miles.

Typical Structure



Applications

Under Review

- Li-ion batteries current collector

Preliminary Product Data Overview

Under Development

Parameter	Value	Units
PET Film Thickness	4.5 +/-10%	μ
Total Thickness	6.5 +/-10%	μ
Yield	39	m ² /kg
Appearance	Metallic (Copper)	
Copper Thickness	~ 1	μ
UTS	MD > 180 CD > 180	MPa
Elongation	MD > 4.5 CD > 4.5	%
Electrical Resistivity	Outside - 0.02 Inside - 0.02	Ω/sqr
Roughness	Ra MD < 0.5 CD < 0.5	μ
	Rz MD < 2 CD < 2	μ
Anti-oxidation	No discolor after 140°C@15mins	
Melting Point	250	°C
Coefficient of Linear Expansion	7 x 10 ⁻⁵	K ⁻¹
Thermal Conductivity	123.5	W/m K
Recommended Storage Conditions	5 - 40	°C
	>50	% RH

Features and Benefits

- **Optimal heat dissipation** - Ideal for limiting EV battery thermal runaway, or for other thermally sensitive applications
- **Low-cost, lighter weight alternative** - Economic alternative to foil products, manufactured using a proprietary, high volume manufacturing process

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.

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Avery Dennison HQ

8080 Norton Parkway, Mentor, Ohio 44060

T:+1 440-534-6000 | www.averydennison.com