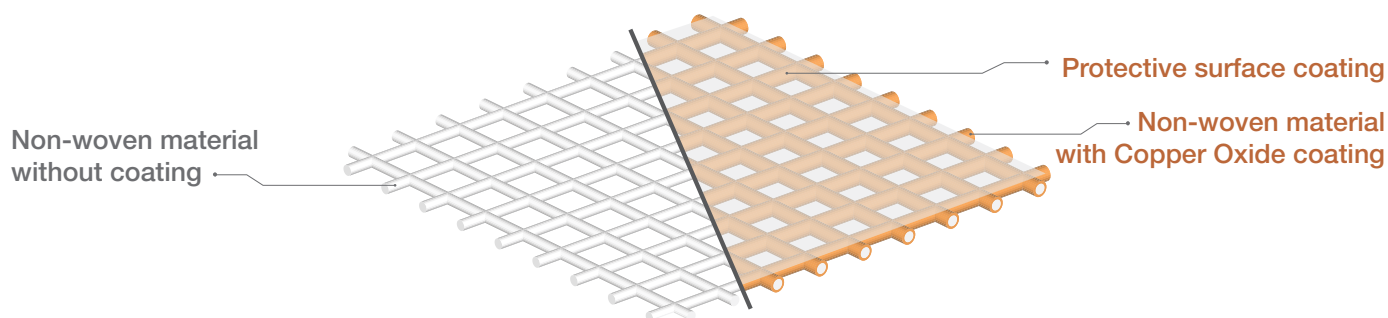


Anti-microbial Copper Oxide Coating for Non-Woven Fabrics

Preliminary Information Sheet

Copper Oxide - a potent virucide

The anti-bacterial and anti-viral “contact killing” properties of copper oxide are well-documented* and are most commonly integrated into textiles through nano-particle coatings. Avery Dennison Hanita© has recently developed a novel, roll-to-roll process for coating non-woven fabrics based on the nanometer-thick deposition of pure copper and alloys. This development features a proprietary surface coating to protect the copper oxide layer from discoloration without affecting its anti-viral properties**.



These coatings have been tested according to ISO21702 and have been demonstrated an effective virustatic†.

Applications:

- > **PPE face masks**
- > **Self-adhesive surfacing sheets**
- > **Disposable medical garments, partition curtains, etc**

Features and Benefits:

- > **Effective** microbicidal and microbiostatic performance
- > **Cost-effective option** to existing antimicrobial coatings
- > **Good mechanical properties:** flexibility, metal adhesion, and overall durability
- > **High volume production:** 2000mm width
- > **Tailored solutions:** preferential custom development
- > **Color stable****

Testing:

[Laboratory](#) testing shows that, when cleaned regularly, antimicrobial copper surfaces kill greater than 99.9% of the following bacteria within 2 hours of exposure: MRSA, VRE, Staphylococcus aureus, Enterobacter aerogenes, Pseudomonas aeruginosa, and E. coli 0157:H7.

*This Avery Dennison product demonstrates effective anti-viral performance, with a mean 99.999% reduction in viral concentration compared to the control sample when tested under ISO21702.

**Tested for 92 hours at 40°C, 90% humidity.

Antimicrobial copper surfaces are a supplement to and not a substitute for standard infection control practices and have been shown to reduce microbial contamination but do not necessarily prevent cross-contamination or infections; users must continue to follow all current infection control practices.

*Contact killing and antimicrobial properties of copper.
J Appl Microbiol. 124, 1032--1046

About Avery Dennison

Avery Dennison (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, 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. Headquartered in Glendale, California, the company employs more than 30,000 employees in over 50 countries. Reported sales in 2020 were \$7.0 billion.

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