

## ADVANCED MATERIALS



## APPLICATIONS

- Conductive Composites
- Reflectors
- Antennas
- Wallpaper
- Shielded Cables
- Heaters
- Lightning Strike Protection
- Aesthetic Finishes
- Electrostatic Discharge
- Cases & Enclosures

## FIBER TYPES

Our technology allows a wide range of fiber types to be coated including carbon fiber, aramid, cellulose, silk, and even carbon nano materials. Contact us to find out more.

## NISHIELD BROADGOODS

Conductive Composites' unique manufacturing process places a continuous, ductile, and pure conductive coating over every surface of our finished broadgood products such as nonwoven veil, paper, and woven cloth. Our process evenly covers all surfaces, fibers, and binders with a smooth and consistent coating. Available in widths up to 66 inches, our coated products are ideal for virtually any composite manufacturing process and are compatible with all common polymer systems.



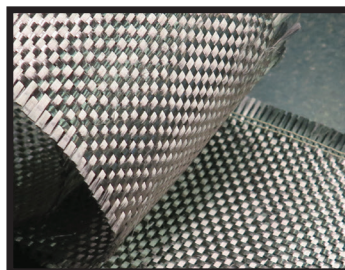
### NONWOVEN VEILS

Our conductive veils are evenly coated as a finished good, producing a uniform, robust, ultra-lightweight, high-performance product. This creates a product that is superior to traditional nonwovens veils that are produced with chopped conductive fibers and electrically insulating binders



### PAPERS

Our conductive papers are coated using conventional cellulose or pulp-based substrates. Our process evenly coats the entire surface of all fibers, and penetrates within and throughout the paper. These conductive paper products are ideal for large-scale shielding applications, such as facilities.



### CLOTH

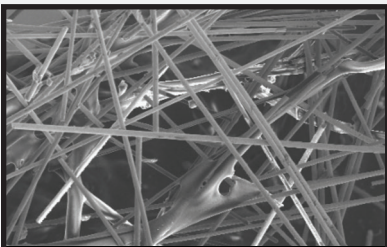
Coated cloths are highly conductive and can be used as substitutes for structural layers in a composite layup. This multifunctional approach allows conductivity to be easily incorporated into composite systems. Conductive cloths are a good option where bulk conductivity or greater functional thickness is needed.

## NISHIELD NICKEL COATED BROADGOODS

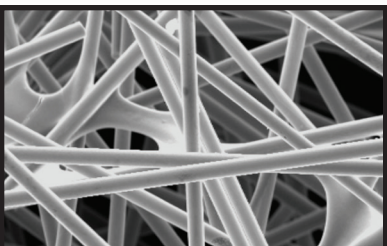
PRODUCT	SUBSTRATE	SURFACE RESISTIVITY	SURFACE RESISTIVITY	CONDUCTIVITY	AREAL WEIGHT	THICKNESS	THICKNESS	1GHz SHIELDING
Part Number	Material Type	Nominal (ohm/square)	Typical Range (ohm/square)	Nominal (S/cm)	Nominal (g/m <sup>2</sup> )	Typical (inch)	Typical (mm)	Typical (dB)
2-0.05-108	carbon	0.05	0.3 to 1.0	400	11	0.0020	0.051	50
2-0.1-108	carbon	0.1	0.08 to 0.29	2000	20	0.0022	0.056	62
2-0.04-108	carbon	0.04	0.03 to 0.07	4000	40	0.0025	0.064	66
2-0.02-108	carbon	0.02	0.020 to 0.029	6000	70	0.0031	0.079	67
2-0.1-1PC	polycarbon	0.1	0.08 to 0.29	2000	22	0.0022	0.056	62
2-0.04-1PC	polycarbon	0.04	0.03 to 0.07	4000	42	0.0025	0.064	66
2-0.05-3CC	cellulose	0.05	0.03 to 0.09	3300	75	0.0030	0.076	72
6A1-3K2x2	twill cloth	0.02	0.020 to 0.029	1600	240	0.0126	0.32	65
6A1-3KPW	plain weave cloth	0.02	0.020 to 0.029	1600	240	0.0126	0.32	65

### CHEMICAL VAPOR DEPOSITION (CVD)

Our proprietary process places a continuous thin film metal coating on substrates and provides superior performance.



Traditional electroplated fibers bound into a nonwoven sheet



Conductive Composites Vapor Deposition Coated Nonwoven

Inquire about additional substrate options, nickel coating levels, converted widths, and infusion options.

### PRODUCT ADVANTAGES

- Ultra lightweight and conductive with highly effective broadband shielding
- Ductile, uniform, impurity-free coating on all surfaces, including binders
- No change in conductivity when infused or cured
- Naturally corrosion resistant and ferromagnetic coating
- Easily incorporated using standard manufacturing processes
- Ultra-thin: reduce laminate thickness and require less resin
- Excellent handling and drapeability
- Coated nonwoven can be wet processed (binder is protected)
- Significant weight and cost savings compared to competing solutions
- Domestically produced in the USA

Conductive Composites believes these values to be typical, however, Conductive Composites does not assume any liability whatsoever for accuracy or completeness of any information contained in this document. Conductive Composites does not warrant this product with respect to merchantability or suitability for use, including any intellectual property or trade restrictions, which is the sole responsibility of the purchaser and/or end user. Always refer to materials handling instructions and safety documentation when using this or any other material. ©2023 Conductive Group.



MADE IN USA

M-007: 08-20-23