

CONDUCTIVE COMPOSITES

Making Plastics and Composites Conduct Like Metals

Nanostrands are the only material that has the following characteristics:

Unique Complex 3D Geometry

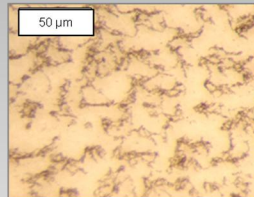
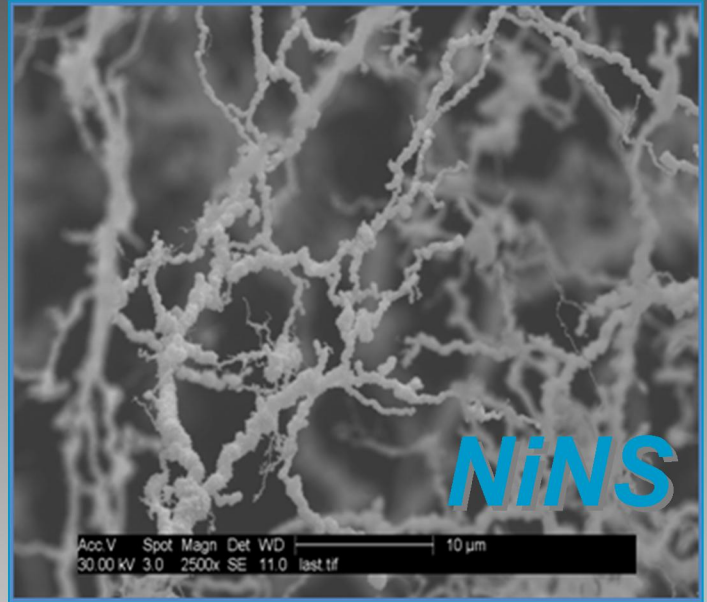
- Nanometer Scale Diameter
- High Aspect Ratio
- Highly Branched

Properties of Nickel

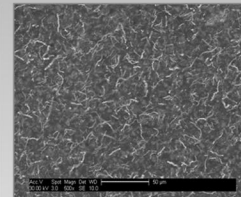
- Conductive
- Magnetic
- Corrosion Resistant

Applications and Markets:

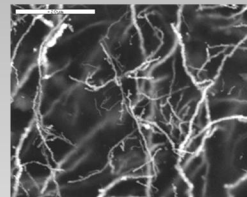
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|---------------------|--------------------|-------------------------|
| • Paints | • Adhesives | • Thermosets |
| • Plastics | • Prepregs | • Thermoplastics |
| • Elastomers | • Filtering | • Coatings |
| • Resins | • Catalysis | • Energy Storage |



0.5 vol% in water 500 x



5 vol% in epoxy 500 x



10 vol% in urethane 2500 x

Nanostrands are highly branched, three dimensional nanostructures that offer the ultimate balance of conductivity, electromagnetic shielding, and mechanical properties. Nanostrands can be used as a high performance additive or as a stand alone material. Nanostrands have proven performance advantages over carbon and silver based technologies. These materials are supplied in an as-manufactured continuous form or as a powder.

Conductive Composites Company is a global technology leader in the development of innovative products and technologies that enable conductivity and electromagnetic shielding (EMI) solutions. Applications include composite materials, polymeric systems, and energy storage and transmission. Conductive Composites offers a portfolio of conductive products that includes nickel nanostrands, nonwovens, nickel-coated carbon fiber, and a line of conductive EMI shielding polymeric products. All materials are traceable, with ISO certification in progress. Additional capabilities include consultation services, contract research, engineered materials, and system solutions.

Typical Properties:

Bulk density (volumeter):	0.090 - 0.250 g/cc
Specific Surface Area (BET):	2 - 5 m ² /g
Purity:	99.999%
Density:	8.91 g/cc

