Conductive metal clad fibers

syscom
advanced materials

www.metalcladfibers.com
About Syscom Advanced Materials

- Leader of design, development and manufacture of conductive hybrid fibers
  - Have produced and shipped over 70 million feet of product
- AS-9100C Certified
- Product development and testing capabilities
- Capacity expansion capabilities
- Professional and experienced staff
- Dependable and innovative partner

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Metal Clad fibers: A high strength, lightweight, and flexible alternative to using metal wiring

SYSCOM’S PROPRIETARY PROCESS INDEPENDENTLY COATS EACH FILAMENT TO MAINTAIN THE TEXTILE NATURE AND CHARACTERISTICS OF THE UNDERLYING POLYMER YARN

1. - OUTER METAL CLADDING
2. - INNER METAL CLADDING
3. - BASE POLYMER FIBER

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AmberStrand® Fiber gives freedom to design and manufacture outside the constraints of traditional wires

Construction
- AmberStrand® has at its core the remarkably durable PBO fiber, Zylon®

Applications
- Used in demanding Military/Aerospace EMI shielding overbraid applications

Availability*
- AmberStrand® is available in 166 or 332 filaments with nickel, silver or copper outer cladding and custom twist per inch

*99 filament product availability being evaluated
Liberate your engineering team from the constraints of wires with **Liberator®** Fiber

**Construction**
- **Liberator®** has Vectran® at its core, a polyester spun from liquid crystal polymers

**Applications**
- Used in specialized microwave coaxial cable EMI shielding applications

**Availability**
- **Liberator®** is available in 40 or 80 filaments with nickel, silver or copper outer cladding and custom twist per inch
X-STEEL™ Fiber: High temperature solution for EMI design problems

Construction
• X-STEEL™ is composed of a 316L Stainless Steel base fiber that is metallized to increase conductivity

Applications
• Used in specialized various EMI shielding applications

Availability
• X-STEEL™ is available in 18 filaments with nickel, silver or copper outer cladding and custom twist per inch.

*Filament count can be customized based on customer's needs.
All of our fibers are:

**Conductive**
- Tailored conductivity for your application

**Flexible**
- Highly flexible and resistant to high flex cycles without losing conductivity

**Compatible**
- Fully compatible with standard braiding, sewing, and embroidery equipment and can be soldered like a regular wire
Syscom Advanced Materials In-House Testing Capabilities

- Physical dimension
- Weight
- Surface morphology
- DC resistance test
- Flex test
- Abrasion test

*Device level test results available
E-Textile applications

- Embroidered antennas
- Woven antennas
- Insulated fiber (wire)
- Conductive tapes
- Military wearable EMI shielding
- Heated apparel
- Pressure sensors
THANK YOU!
QUESTIONS?