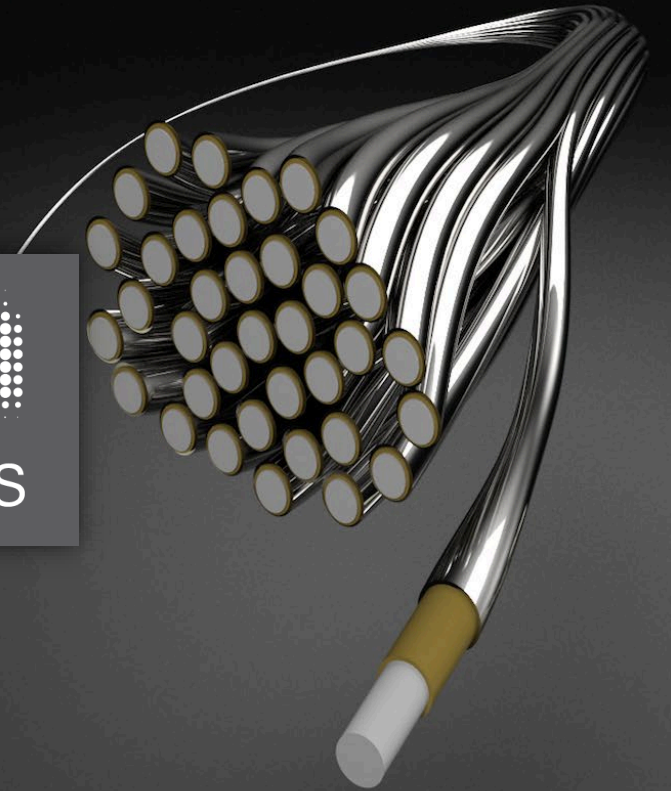


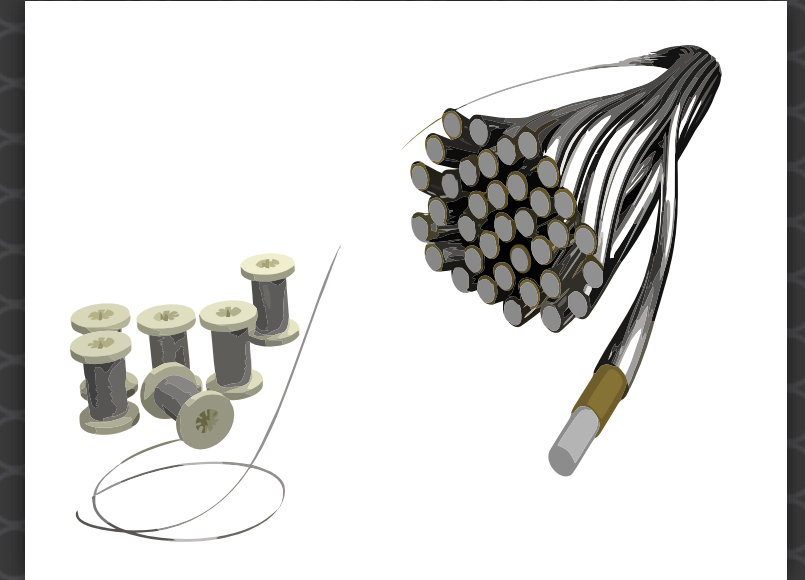
# Conductive metal clad fibers

  
advanced materials



# About Syscom Advanced Materials

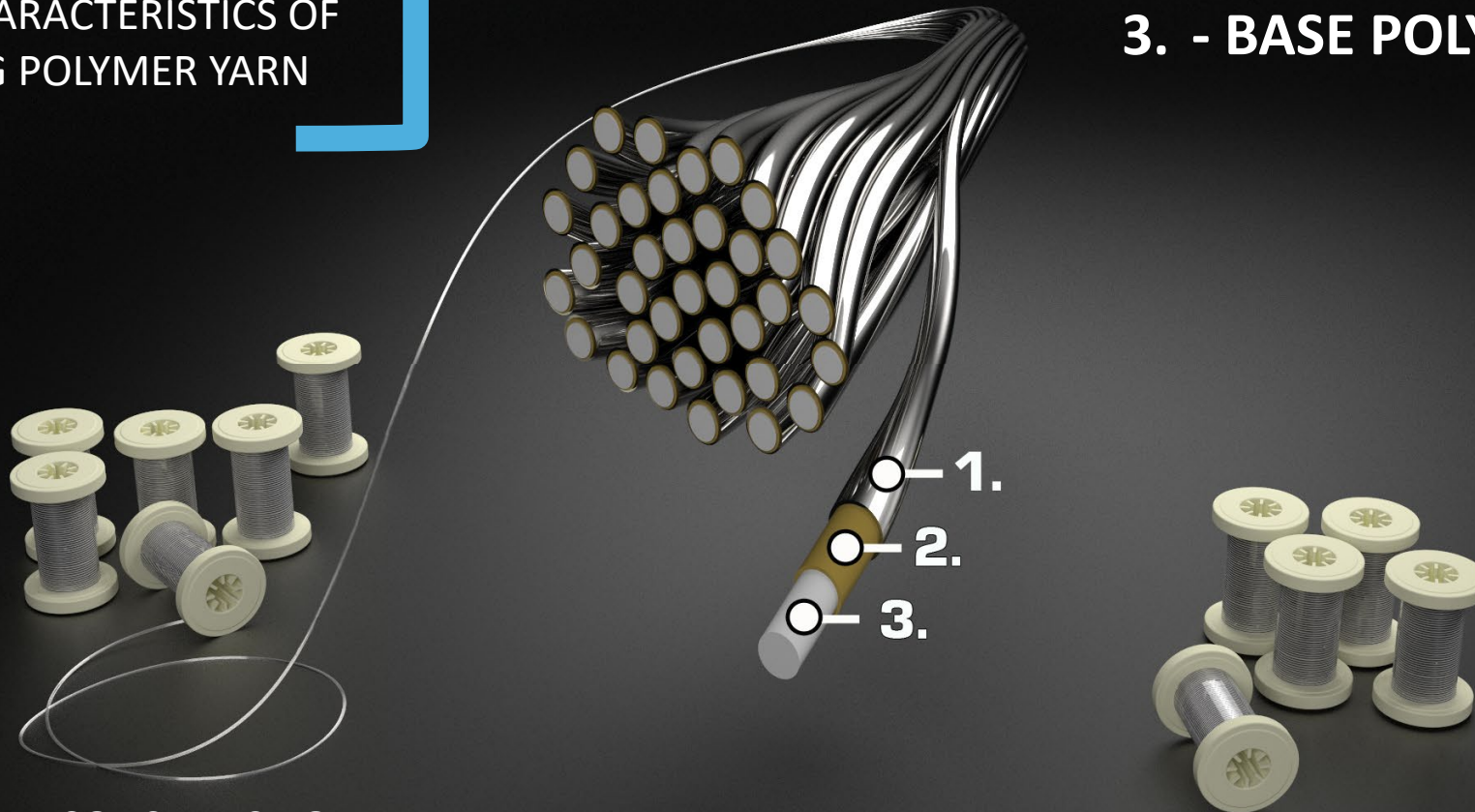
- Leader of design, development and manufacture of conductive hybrid fibers
  - Have produced and shipped over 70 million feet of product
- AS-9100C Certified
- Product development and testing capabilities
- Capacity expansion capabilities
- Professional and experienced staff
- Dependable and innovative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



# 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



METAL CLAD FIBER CONSTRUCTION

[www.metalcladfibers.com](http://www.metalcladfibers.com)

**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

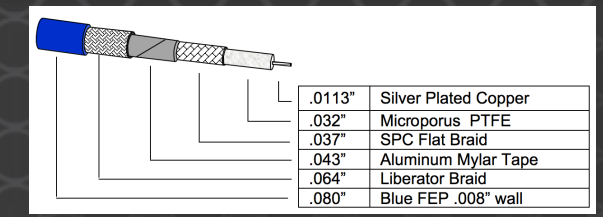
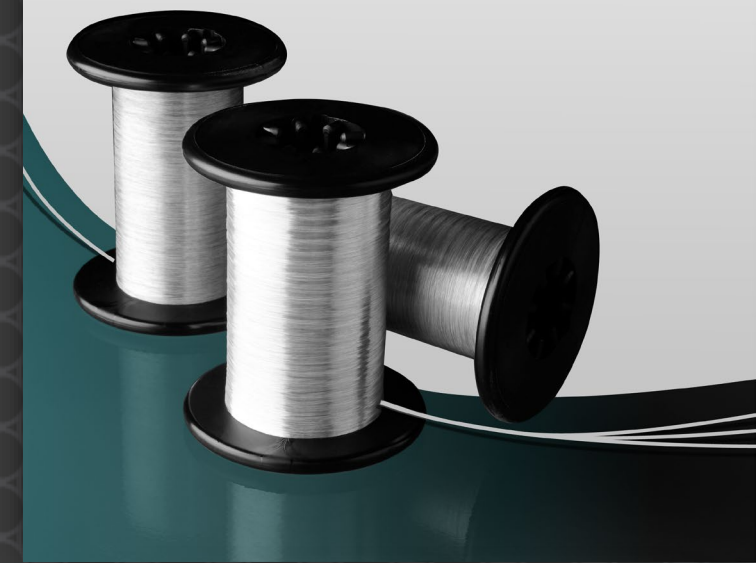
\*99 filament product availability being evaluated

Manufactured with:



Zylon® is a registered trademark of Toyo Boseki Kabushiki Kaisha Corporation.  
Kevlar® is a registered trademark of E. I. du Pont de Nemours and Company.

Liberate your engineering team from the constraints of wires with **Liberator®** Fiber



Manufactured with:



Vectran® is a registered trademark of Kuraray Co., Ltd., Tokyo, Japan.

## 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**

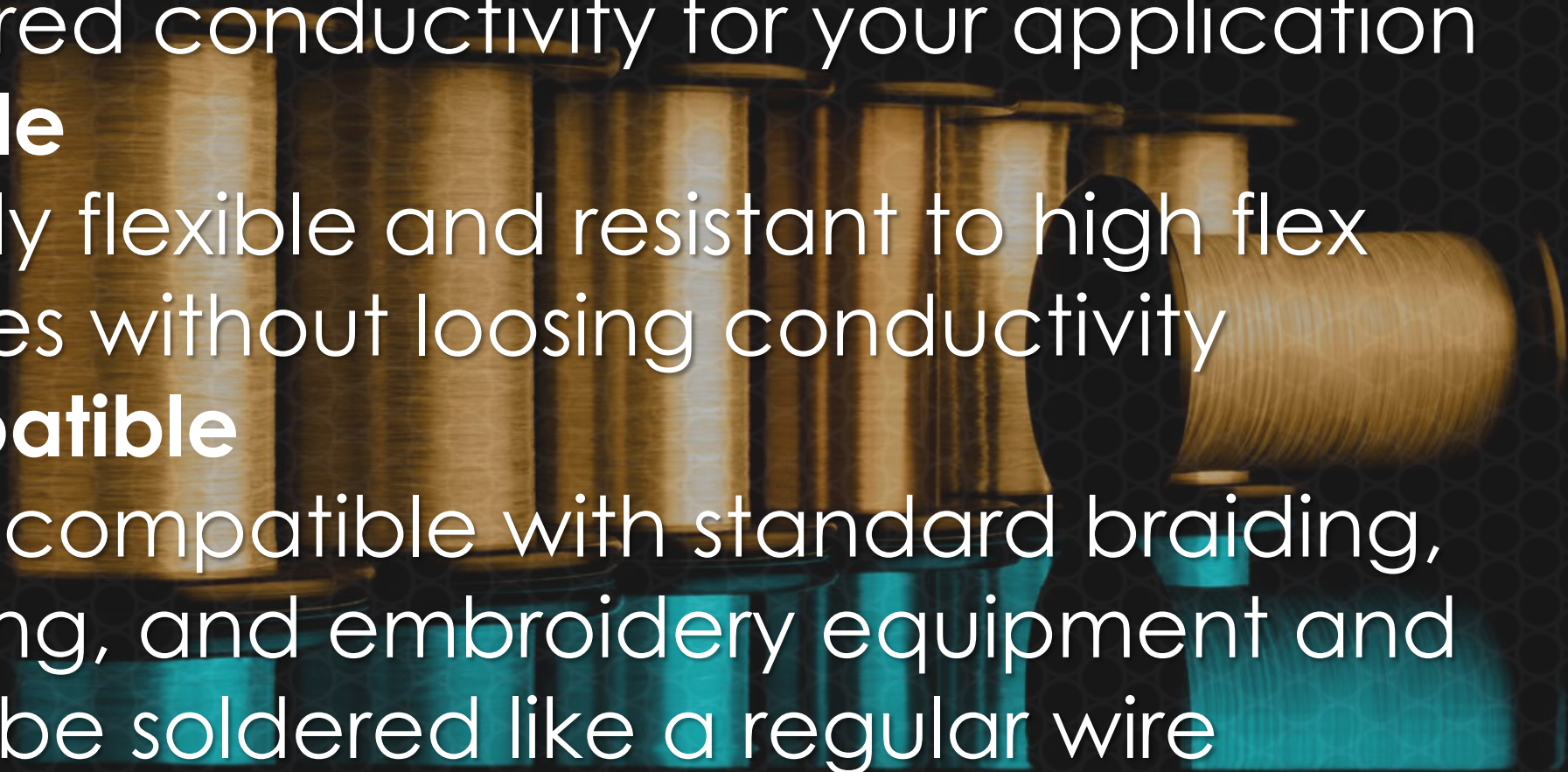
- Tailored conductivity for your application

## **Flexible**

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

## **Compatible**

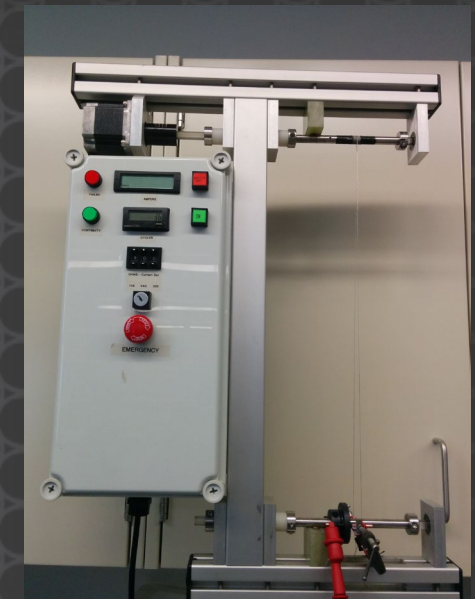
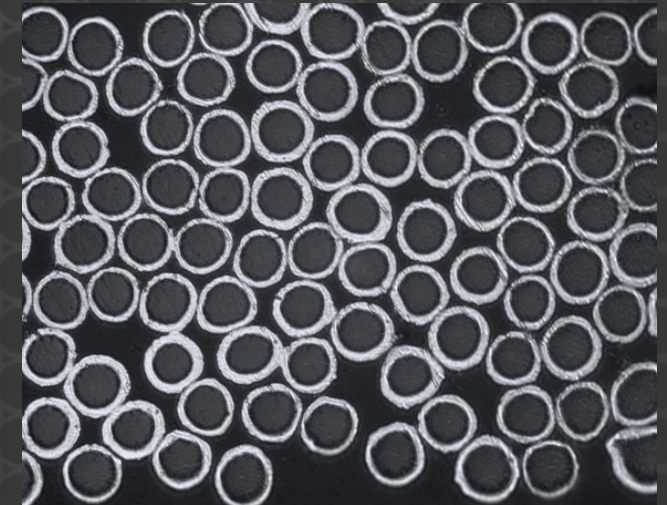
- Fully compatible with standard braiding, sewing, and embroidery equipment and can be soldered like a regular wire



# 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?