

AmberStrand® Fiber is one of **Syscom Advanced Materials'** novel conductive metal-clad fibers. By pairing a light-weight, flexible, and high-strength **Zylon®** fiber core with a conductive metal outer layer, **AmberStrand®** Fiber gives freedom to design and manufacture outside the constraints of traditional wires. Designed to have excellent thermal stability, strength, cut resistance, and tailored electrical conductivity, **AmberStrand®** Fiber is optimized for use as a soft textile-like shielding braid, bare wire, or coated with insulation material. Further, **AmberStrand®** Fibers can be terminated by soldering or band connectors.

AMBERSTRAND® 166

Fiber	Toyobo Zylon®
Fiber Material	PBO Poly(p-phenylene-2, 6 benzobisoxazole)
Filament count	166
Outer Metallization Layers Available	Copper/Nickel/Silver
Yarn Diameter*	0.0097 in
Flat Width**	0.0275 in
% Metal by Weight	82.50%
Weight	0.107 lbs/1,000 ft
Weight	0.0485 g/ft
DC Resistance	~1 Ω/ft
Breaking Load	23.1 lbs
Tensile Strength	5.8 GPa
Operating Temperature	Up to 260 °C
Melting point	650 °C
* Ideal close-packed calculated diameter	
** Width of material as it lays in a braiding configuration	

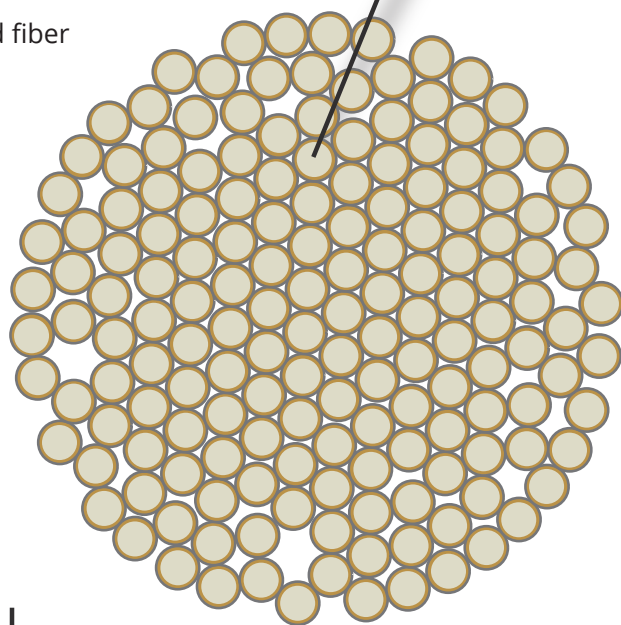
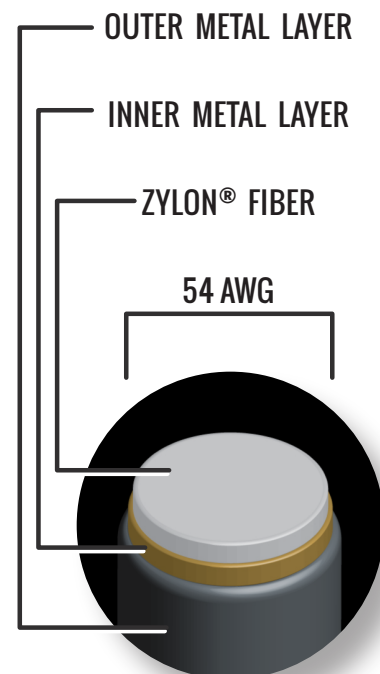
The data presented here is provided only as a guide and is based on internal and/or external testing of samples of standard production runs of Amberstrand® Fiber. Please contact Syscom Advanced Materials for additional property data or customization options.

PROPERTIES

- 65% lighter in weight than 30 AWG (stranded 40/46 Type C) copper wire
- Superior coverage results in up to 90% total weight savings in aerospace applications
- 6 times greater break strength than 30 AWG (stranded 40/46) copper wire
- Can be soldered or crimped
- Compatible with metal wire braiding equipment
- Supplied twisted or untwisted on braider bobbins
 - 1.7 twists/inch (TPI): Braiding Applications
 - 4.5 twists/inch (TPI): Sewing Applications

AmberStrand® metal clad fiber has excellent thermal stability, strength, cut resistance, and tailored electrical conductivity. **AmberStrand®** fiber utilizes **Zylon®** fiber and is available in 166 and 332 filaments metalized with nickel, copper or silver cladding.

1305 Kinnear Rd.
Columbus, OH 43212
614.487.3626
www.metalcladfibers.com



CLOSE - PACKED DIAMETER