ARACON®

LIGHTWEIGHT. STRONG. FLEXIBLE.

ARACON® Conductive Fiber

ARACON fibers combine the conductivity of an outer metal coating with the strength, light weight, and flexibility of aramid fibers. ARACON fibers are based on the same technology that created Kevlar®, well known for its use in bullet resistant vests, high speed boats, and military helmets.

ARACON fibers represent a new class of conductive fibers ideally suited for EMI shields on cables and harnesses, especially where weight savings is important. When braided or woven, the natural tendency for the fine, lightweight fibers is to spread out for high optical coverage. This translates into superior shielding effectiveness versus copper wire.

ARACON is available in various sizes with both a nickel or silver finish. All ARACON fibers provide a versatile combination of physical and electrical properties for a variety of demanding applications. Custom configurations, multiple ends, and put-ups are available upon request.

General Properties

- **Weighs 60% less** than copper wire at equal volume.
- Can be braided on **same equipment** used for metal.
- Can be banded or crimped.
- Able to cut with a **scissors**.
- Available on 3,000 ft. Wardwell spools or 2,000 ft. Butt braider bobbins.

Features & Benefits

Reliable

- ✓ Military and Spaceflight qualified
- ✓ Will perform in the harshest environments

Industry Leading Electrical Conductivity

- ✓ Low DC resistance
- ✓ Maximum power transfer
- ✓ Better RF shielding

Light Weight

- ✓ Up to 80% lighter than copper in typical applications
- ✓ Save fuel, more payload

Stronger than Steel

- ✓ Built on Kevlar®
- ✓ No more broken wires during installation

Flexible

- ✓ Feels like a textile
- ✓ Easier to shape the most difficult configurations
- ✓ Longer flex life
- ✓ Lower maintenance cost

Affordable

- ✓ The most cost effective composite solution
- ✓ Satisfy almost any cost-weight benefit analysis

206 Jones Blvd, Pottstown, PA 19464, United States +1 (610) 495-0110

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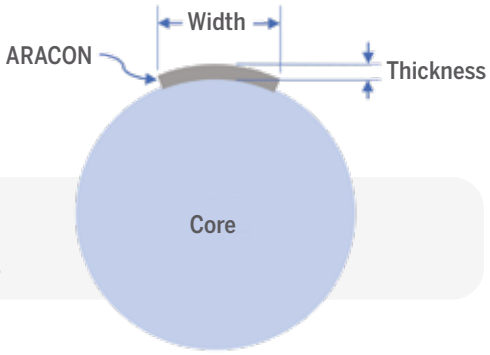
Specifications

- Operating temperature of -110°C to +150°C with intermittent exposure to +200°C.
- Thermal shock per MIL-STD-202, Method 107, Test Condition B-2.
- Exhibit less than 1% Total Mass Loss (TML) and 0.1% Collected Volatile Condensable Materials (CVCM) when tested per ASTM E-595. Water vapor recovered (VMR) is considered when performing calculations.
- Shall not support the growth of fungus when tested in accordance with MIL-STD-810, Method 508.5.
- 48-hour exposure to a salt fog environment in accordance with ASTM B-117.
- 48-hour exposure to a sulfur dioxide environment in accordance with ASTM G-85, Annex A4 and X4.
- FAA flammability requirements as specified in CFR 14 Part 25.
- FAA smoke density requirements as specified in CFR 14 Part 25.
- Smoke toxicity as specified in BSS 7239 and AITM 2.0008.
- Resistant to over 23 standard fluids.



When braided or woven, ARACON fibers will spread as illustrated in the figure, creating more optical coverage than the equivalent sized round wire.

Nickel Plated ARACON Data		XN0130E-020	XN0200-025	XN0400E-018
Silver Plated ARACON Data		**XS0130E-020**	**XS0200-025**	**XS0400E-018**
Width (See above)	in	0.018	0.020	0.030
	mm	0.46	0.51	0.76
Thickness (See above)	in	0.003	0.004	0.005
	mm	0.08	0.10	0.13
Equivalent Diameter	in	0.008	0.009	0.014
	mm	0.20	0.23	0.36
Weight (Maximum)	lbs/kft.	0.062	0.084	0.166
	kg/km	0.092	0.125	0.246
DC Resistance @ 20° C (Maximum)	Ω/ft	4.0	2.0	1.0
	Ω/m	13.2	6.6	3.3
Break Load (Minimum)	lbs	3	4	10
	N	13.3	17.8	44.5

ARACON fibers have a long history of enabling the most difficult weight budgets without sacrificing electrical performance. If you are looking to separate yourself from the competition, try ARACON, it opened the space market for Micro-Coax when we started incorporating ARACON in our coaxial cables and it can make the same difference for you.

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