Specialty and High Temperature Fine Wire
Cable USA is a world leader in specialty, fine wire and cable. We offer a select line of high-performance, high & low temperature insulated wire from 26 to 40 AWG and cables up to 100(+) conductors. Our fine wire products are found in industries that demand the most technologically advanced wire and cable products made to exacting specifications.

**Specialty Fine Wire & Cables**

Cable USA engineers, polymer scientists and our technical sales team have extensive experience with applications requiring small gauge wire and cables that withstand severe environmental influences. Cable USA fine wire and cables serve the following markets:
- Surgical Instrumentation
- Medical Device/Imaging
- Aerospace/Consumer Electronics
- Instrumentation
- Sensor/Temperature Sensing
- Military/Defense
- Specialty Equipment
- High Speed Data (differential balanced line and coax)

**Product Attributes**

- Ultra Flexible - If cable flexibility is a concern, fine wire stranding and flexible insulation materials will make even large medical cables manageable.
- High Flex Life - An extensive line of alloy conductors, matched with the results of years of flex life research, allows us to design reliable EKG patient cables and other custom medical cables that will outperform those of our competitors.
- Autoclavable – our high-temperature and moisture-resistant fine wire and cables are autoclavable.
- Low-Noise - Small signal applications require special designs to ensure signal integrity. Our high-performance fine wire and cables are specifically designed to eliminate problems with mechanically generated noise.
- Low-Elongation/High-Tensile Strength Jackets - When cleaning a cable jacket, the wiping process can cause the highly flexible jacket to stretch. Our custom engineered jackets eliminate this problem without sacrificing the benefit of high flexibility.
- Low-Kink - Using special manufacturing techniques, deterioration of the once aesthetically pleasing cable jacket can be prevented.
- Miniaturization - Fine wire conductors and high-performance insulation materials allow for significant size reduction without sacrificing performance.

**Capabilities:**

- Construction: single to 100(+) conductors, 26 – 40 AWG, shielded and unshielded.
- Conductors: Bare, Tin, Nickel, and Silver Plated Coppers, Thermocouples, Carbon Fiber, Tinsel, specialty alloys and precious metals.
- Insulations: PE, PP, PVC, ETFE, FEP, PFA, tapes and many other high-performance, high & low temperature compounds.
- Cabling: pairs, triads, quads; as well as, composite combinations.
- Shields: Bare, Tin, Nickel, Silver Plated Copper, Alloys, Foil – Braid and Serve designs available.
- Jackets: Polyurethane, PVC, Nylon, ETFE, FEP, PFA, Silicone Rubber, Glass Braids and many others.
- Temperature Ranges: -100°C to 260°C. Other constructions to 650°C.
A World Leader in High Temperature Custom Engineered Cable

Insulated Fine Wire and Cable can be compliant to the following Standards:

- ETFE Lead Wire – AS22759/16-19
- UL CMP (#28 AWG) with FEP/ECTFE/PVC
- UL CL2P (#30 AWG) with FEP/ECTFE/PVC
- UL-758 AWM Styles 20233, 20234, 20235, 20236, 20262, 20308
- CSA Class I Group A (#28 AWG) with FEP
- CSA Class I Group A/B (#32 AWG) with PFA
- M27500 Cables
- M16878 Wire
- IEEE-1202

Typical Cable Constructions

Shielded Cables (#40 AWG Braid)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Jacket Material</th>
<th>AWG Size</th>
<th>No. Of Conds.</th>
<th>Insulation Thickness</th>
<th>Jacket Thickness</th>
<th>Overall Diameter</th>
<th>NET WGT LBS/KFT</th>
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Dimensions in inches (nominal). Data regarding additional sizes is available from Cable USA. Consult factory for minimum quantities and delivery at time of quotation. Dimensions and weights are subject to change. Consult factory before ordering.
Conductors and Additional Materials
- All types & platings of copper conductors
- Copper-alloy high performance conductors
- Thermocouple alloys
- PTFE tape
- Mica tape
- Ceramic tape
- Fiberglass tape
- Fluoropolymer tape (sintered, un-sintered, conductive, colored)
- Shielding Braids (copper, NPC, alloy)
- Armoring Braids (SS302, 304, 316)
- Textile Braids (glass, K-fiber)

Product Size Range
Minimum
- #40 AWG / .002 wall thermoplastic
- #24 AWG / .015 wall silicone

Maximum
- 1100 MCM
- 3.000” O.D. (braided jacket)
- 2.000” O.D. (high-temperature jacket)
- 1.750” O.D. silicone rubber

Maximum Reel Size: 84.00”

Some of our Specialty Cable Types
- High-Temperature Wire & Cables
- Coil Cords
- Very Large Cables
- Coiled / Retractable Wire and Cable
- Flat Festoon Cables
- Vented Cables
- Pump Cables
- Custom Products per Customer Specifications

Synergizing Technology
Cable USA has the unique ability to provide a comprehensive family of high-temperature wire and cable products to address the specialized needs of industry. With over 50 years of combined experience in solutions for the Wire and Cable industry, our World Class team of polymer scientists and engineers are uniquely qualified to develop solutions to new technology challenges.

Facility Size
- Land Area: 3.37 Acres
- Total Size of Facility: 66,000 Square Feet
- Office Space: 6,000 Square Feet
- Factory / Production: 57,000 Square Feet
- Distribution / Warehouse: 3,000 Square Feet

Primary Processes
Cable USA is an integrated facility which houses all engineering, manufacturing, quality control and administrative operations under one roof.

Product Types and Processes
- Thermoplastic Fluoropolymer Extrusion – Specializing in FEP, ETFE, and PFA
- Textile Braiding
- Stainless Steel Braiding
- Short-Run / Specialty Cables
- Miniature Multi-Conductor Cables
- Extreme-Temperature Applications
- Composite Cable Design
- Coiled / Retractable Wire and Cable

Materials Used
- FEP
- ETFE
- PFA
- Polyurethane
- Silicone Rubber
- Polyester Elastomer
- E-CTFE
- Polyethylene
- Polypropylene
- PVC
- PVDF
- And many others...

Extrusion Capabilities
- (9) Hot-Melt Extrusion Lines
- (2) Silicone (HAV) Extrusion Lines

Facility History
- Business Established: 1984
- Present Building Constructed: 1987
- First Expansion: 1989
- Second Expansion: 1994
- Third Expansion: 2008

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