

Litz Wire

Manufacturers of electronic components need a dependable source for Litz wire of the highest quality.

New England Wire Technologies pioneered and continues to be a leader in the manufacturing of high quality Litz wire for worldwide application.

Rely on us for the manufacturing experience and production capability for all your specialty Litz wire requirements.



NEW ENGLAND WIRE TECHNOLOGIES
new challenges. NEW solutions.

Litz Wire

The term "Litz," derived from the German word "Litzendraht," describes a conductor consisting of a number of separately insulated strands that are twisted or braided together. Since each strand tends to take all possible positions in the cross section of the entire conductor, this design equalizes the flux linkages – and reactances – of the individual strands causing the current to spread uniformly throughout the conductor. The resistance ratio (A.C. to D.C.) then tends to approach unity which is desirable in all high Q circuit applications.

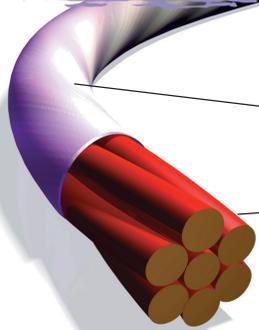
In 1898, New England Wire Technologies became the first company in the United States to manufacture Litz wire on a commercial basis. Since then, we have designed and manufactured thousands of different constructions for use over the E.L.F. through H.F. frequency ranges. Typical applications for Litz conductors which we have manufactured include high frequency inductors and transformers, inverters, communication equipment, ultrasonic equipment, sonar equipment, television equipment, radio equipment and induction heating equipment.



Five generations of craftsmen have built our reputation for quality, responsiveness and dependability.

Litz Wire Types & Construction

Round
Type 1

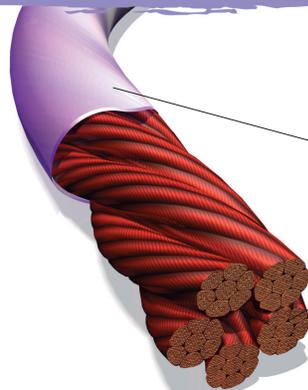


Type 1 Litz construction features a single twisting operation with optional outer insulation.

Outer insulation of textile yarn, tape or extruded compounds

Single film-insulated wire strand

Round
Type 2

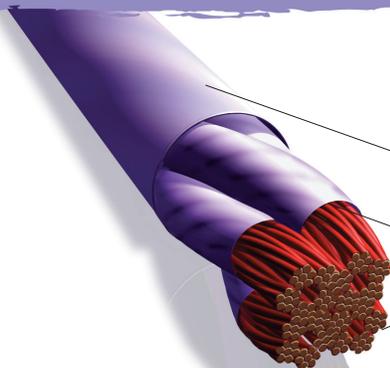


Type 2 Litz construction features bundles of twisted wire twisted together with optional outer insulation.

Outer insulation of textile yarn, tape or extruded compounds

Bundles of Type 1 Litz wire

Round
Type 3



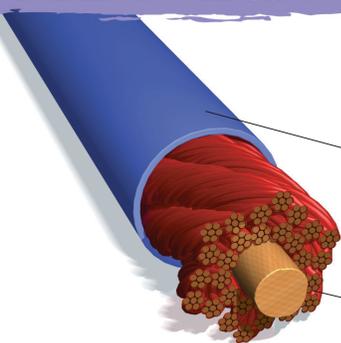
Type 3 Litz construction features insulated bundles of twisted wire twisted together with optional outer insulation.

Outer insulation of textile yarn, tape or extruded compounds

Individually insulated bundles

Bundles of Type 2 Litz wire

Round
Type 4



Type 4 Litz construction features bundles of twisted wire twisted around a central fiber core.

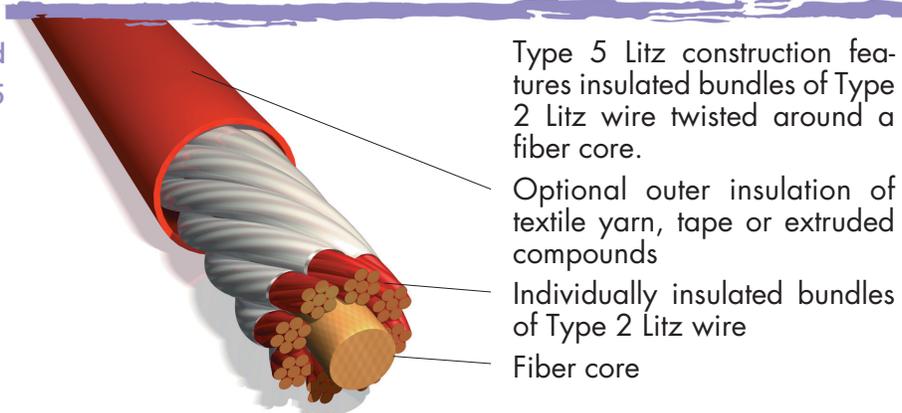
Optional outer insulation of textile yarn, tape or extruded compounds

Bundles of Type 2 Litz Wire

Fiber core

Litz Wire Types & Construction

Round
Type 5



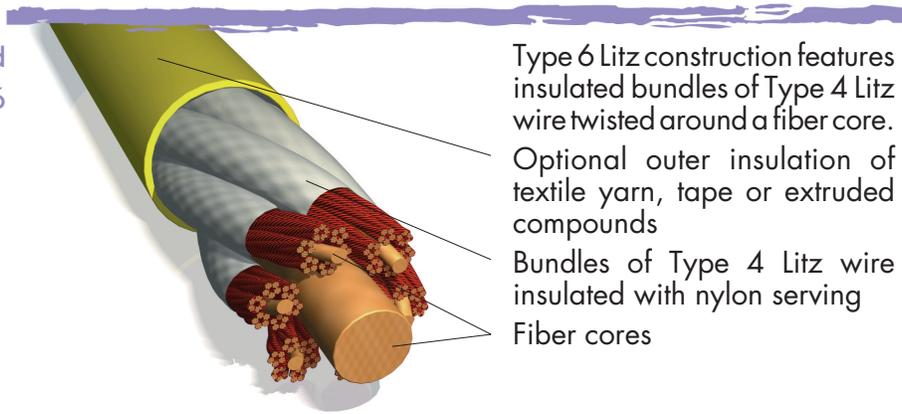
Type 5 Litz construction features insulated bundles of Type 2 Litz wire twisted around a fiber core.

Optional outer insulation of textile yarn, tape or extruded compounds

Individually insulated bundles of Type 2 Litz wire

Fiber core

Round
Type 6



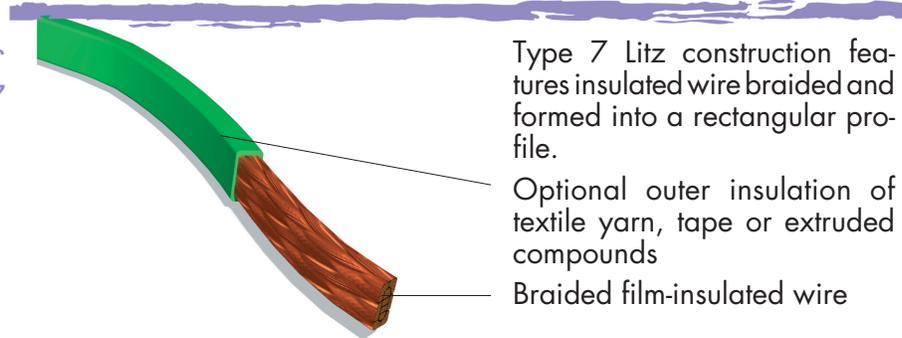
Type 6 Litz construction features insulated bundles of Type 4 Litz wire twisted around a fiber core.

Optional outer insulation of textile yarn, tape or extruded compounds

Bundles of Type 4 Litz wire insulated with nylon serving

Fiber cores

Rectangular
Type 7

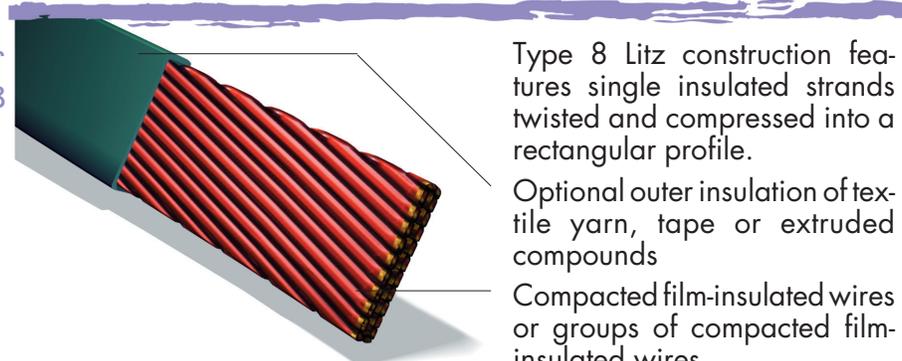


Type 7 Litz construction features insulated wire braided and formed into a rectangular profile.

Optional outer insulation of textile yarn, tape or extruded compounds

Braided film-insulated wire

Rectangular
Type 8



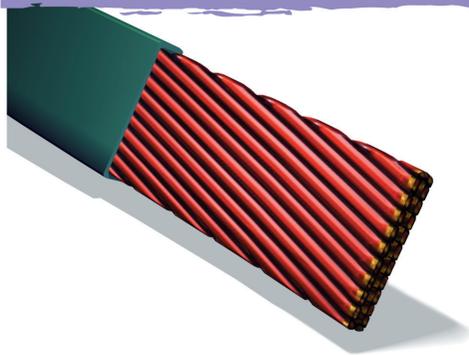
Type 8 Litz construction features single insulated strands twisted and compressed into a rectangular profile.

Optional outer insulation of textile yarn, tape or extruded compounds

Compacted film-insulated wires or groups of compacted film-insulated wires

Litz Wire Multiple Insulations

Multiple Insulation on Complex Bundles

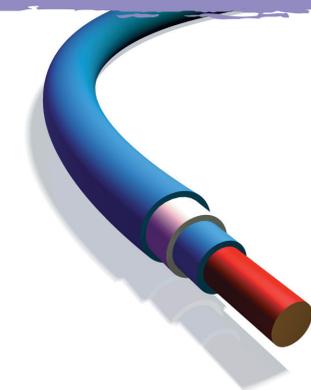


Many Litz wire constructions are available with multiple layers of insulation to meet the voltage-withstand requirements of UL and IEC. Multiple extruded layers of fluoropolymers, such as FEP, PFA, and ETFE are most common. These extrusions are offered in different colors so that the different layers are easily distinguishable.

Various tape wraps, such as polyimide and polyester are available for applications requiring greater cut-through resistance and minimum diameter.

These products, most commonly used in power conversion equipment, are desirable in any application requiring additional voltage-withstand between windings.

Multiple Insulation on Single Strand



All of the insulations available for complex bundles are also available over single-strand bare, tinned and silver-plated copper as well as various copper alloys and magnet wires.

Note:

Many of the constructions described in this brochure can be supplied as UL recognized components or manufactured to specific AWM styles.

Rely on us for all your high quality specialty wire needs.

Included among the typical conductor base materials and extruded insulations we can offer are:

Conductor Materials

Bare copper magnet wire is the standard material used by New England Wire Technologies to produce its Litz wire products. Copper with various platings, OFHC bare copper, and high-strength copper alloys, are all available on a special order basis.

Extruded Insulations

- ▶ FEP
- ▶ Nylon
- ▶ Silicone Rubber
- ▶ PFA
- ▶ Polyester
- ▶ PVC
- ▶ Polyethylene
- ▶ ETFE
- ▶ Polypropylene
- ▶ TPE
- ▶ Polyurethane

Development Assistance

New England Wire Technologies welcomes all opportunities to assist in the design, development, testing and manufacture of specialty wire products. If your requirements include materials that are not listed above, please contact us to review your specific needs.

Product Information

For more information on our range of specialty manufacturing products and capabilities, please consult our other product sheets.



A World of Custom Products

New England Wire Technologies
130 North Main Street
Lisbon, NH 03585 USA
Tel: 603.838.6625
Fax: 603.838.6160
Fax: 603.838.2805
sales@newc.com
www.newenglandwire.com



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