

**NEWind** \ 'nū - wīnd \ n

**1** : A specialty winding wire designed to eliminate additional ground, interwinding, and turn insulation in motors and transformers reducing cost and size.

**2** : One of many high-performance product offerings from New England Wire Technologies, a world leader in the design and manufacture of specialty wire and cable.

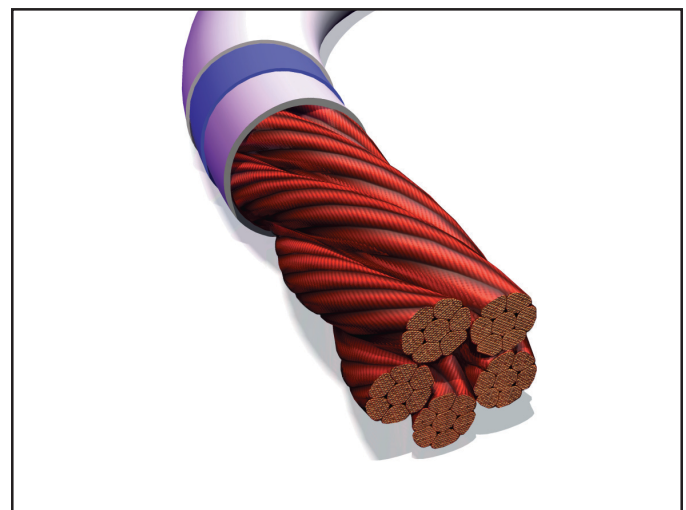
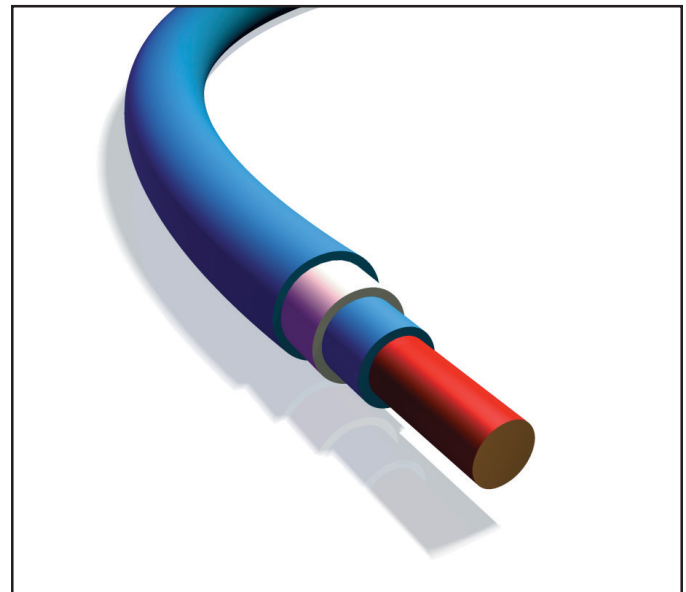
### Product Details

- ◆ UL 60950/IEC 60950 Annex U Approved
- ◆ UL 1446 Electrical Insulation System:
  - NE-F1 - Class F (155°C)
- ◆ Single-End, Stranded, and Litz Conductors
- ◆ Supplementary and Reinforced Insulations

### Technical Information

The most common winding wire is magnet wire in either its single-end or stranded “Litz” form. The magnet wire coating is generally not sufficient for insulating between winding turns, separate windings, and between the winding and ground as the magnet wire coating can easily be damaged. It is for this reason that additional interleaved insulation is needed.

NEWind® Specialty Winding Wire solves this problem by insulating the conductors with thin layers of insulation. The insulation layers are extruded in either two layers (Supplementary) or three layers (Reinforced). This design ensures that defects in any one layer will not reduce the insulating ability. Motors and transformers can then be manufactured without additional insulation thus reducing their cost and size.



Material Properties			
Property	ETFE	FEP	PFA
Temperature Rating	155°C	180°C	200°C
Layer Thickness (Minimum)	0.0015"	0.002"	0.002"
Total Thickness Supplementary (Minimum)	0.003"	0.004"	0.004"
Total Thickness Reinforced (Minimum)	0.0045"	0.006"	0.006"

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**new challenges. NEW solutions.**

Electrical Insulation Systems are invaluable to motor and transformer designers as they eliminate the need for long term component testing. Combining the regulatory approvals of NE-F1 with the capabilities and experience of New England Wire Technologies at producing high-performance winding wire products allows us to provide unique solutions to meet design challenges associated with today's winding needs.

## Product Details

- ◆ UL recognized for Class F (155°C) applications:
  - OBJS2 File E231977
  - Component IEC 60085
  - CAN/CSA C22.2 No. 0-M91, Appendix B
- ◆ Approved for use in the construction of:
  - Transformers
  - Motors
  - Coils
- ◆ Provides a large selection of major and minor component materials to support any application.

## Technical Information

NE-F1 was developed as the solution to cost, size, and time saving issues. Extensive research and component testing allows us to provide a complete range of materials that are ideal for transformer, motor, and coil designs. Coil designers are given more freedom in their device designs as they are not limited to a narrow range of materials. This design freedom leads to higher efficiency, smaller, lower cost devices that can be brought to market without long-term testing delays.

NE-F1 features the NEWind® Specialty Winding Wire product line which is designed to eliminate the need for separate ground, interwinding, and turn insulation. This results in a smaller device that performs equivalent to, if not better than, the bulky and costly larger devices.

NE-F1 also features a wide variety of bobbin materials, tapes, sleeving, potting compounds, and varnishes. This diverse selection of materials ensures that NE-F1 will be able for most Class F devices, thus reducing the need for multiple Electrical Insulation Systems.

INSULATION SYSTEM - MAJOR COMPONENTS	
Magnet Wire (Winding Wire)	
Category	Components
Polyester	MW30, MW35, MW73, MW74, MW76
Polyester (Solderable)	MW77, MW78
Polyurethane (Solderable)	MW79, MW80, MW82, MW83
NEWind® Winding Wire	ETFE, FEP, PFA
Ground and Interwinding Insulation	
Supplier	Components
E.I. DuPont	Kapton HN
	Nomex 410, 414, 416, 418
	PTFE
	Rynite 530, FR530, FR530L, FR943
Sumitomo Bakelite	Zenite 6130
	E4008
-	PM-9630
	PET Film
Varnishes	
Supplier	Components
John C. Dolph	AC-43
	BC-346A, BC-346B, BC-346-AN, BC-346F
	BC359
	BC365
	CC-1105
Ripley Resin Engineering	468-2
Viking Products	V1380FC
	V1630FS

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