

Product Overview: LP Paper Covered Wire (Paper Insulated Wire) is manufactured by extruding high-purity oxygen-free copper or electrical aluminum rods, wrapped continuously with multi-layer high-grade insulating paper (Kraft, NOMEX®, etc.). Engineered for high-voltage oil-immersed transformers, reactors, and heavy electrical equipment with superior thermal stability, dielectric strength, and mechanical toughness.

High Purity Conductor

Oxygen-Free Copper (Cu ≥99.95%, ≤0.017241 Ω·mm²/m) & EC Grade Aluminum for optimal conductivity.

Precision Taping

Multi-layer tight wrapping without wrinkles or gaps. Seamless overlap ensured for continuous insulation.

Superior Dielectric

Excellent voltage resistance in transformer oil, reducing coil volume & thermal losses effectively.

Tailored Material

Options include Cable Kraft Paper, DuPont NOMEX®, High-Density Telephone Paper, and MIK paper.

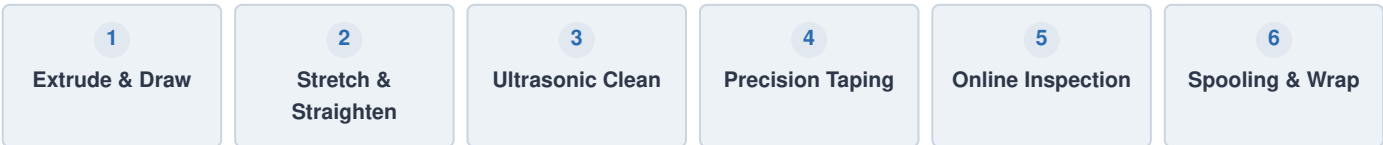
TECHNICAL SPECIFICATIONS

Parameter	Specification Details
Conductor Material	Oxygen-Free Copper Rod / Electrical Round Aluminum Rod
Round Dimension	Diameter: 1.0 mm – 7.0 mm (Copper & Al)
Rectangular Size	Thickness (a): 0.9 – 10.0 mm Width (b): 3.0 – 35.0 mm
Thermal Class	Class A (105°C), Class E (120°C), Class H (180°C), Class C (220°C)
Insulation Types	Kraft Electrical Paper, NOMEX® Paper, Telephone Paper, 3M/HPI-Green
Insulation Thickness	0.27mm, 0.33mm, 0.45mm, Single/Double/Multi-layer overlapping
Compliance Standards	IEC 60317 / GB/T 7673 / NEMA / JIS / UL / RoHS / ISO9001

KEY ADVANTAGES & FEATURES

- **Smooth & Defect-Free Surface:** Precision extruding and drawing mold ensures zero burrs and uniform dimensions, protecting paper from abrasion.
- **Tight & Uniform Wrapping:** Synchronized double-layer or multi-layer paper twining in controlled directions without gaps (>3mm limit strictly adhered to IEC).
- **Excellent Heat & Oil Resistance:** Outstanding insulation retention under transformer oil immersion and thermal shock conditions.
- **Increased Filling Coefficient:** High-density compact structure optimizes slot filling ratio and reduces overall transformer volume and core cost.
- **Mechanical Flexibility:** Excellent elongation (≥17% for Al, ≥30% for Cu) ensuring zero paper cracking during tight coil winding.

6-STAGE PRECISION MANUFACTURING PROCESS



PRIMARY APPLICATIONS

- **Oil-Immersed Power Transformers:** High-voltage / Medium-voltage primary and secondary winding coils.
- **Electrical Reactors & Chokes:** High-current power grid stabilization reactors.
- **Specialized Transformers:** Traction transformers, furnace transformers, and distribution units.
- **High-Voltage Instrument Transformers:** Inner-turn insulation coils requiring high mechanical cut-through.

Cable Paper Covered Copper Wire

NOMEX® Paper Covered Wire

Telephone Paper Covered Wire

High-Voltage Inner Turn Wire

Paper Covered Aluminum Wire

Custom OEM Insulation

PACKAGING & EXPORT PROTECTION

- **Spool Options:** Wooden spools & PT-25 to PT-200 plastic spools (30kg, 50kg, 150kg standard weights).
- **Interlayer Protection:** Protective paper interlaid between wire layers to prevent friction during transport.
- **Moisture-Proof Barrier:** Sealed with inner plastic vacuum/shrink film + outer robust plywood case for ocean freight.

Need Customized Winding Solutions or Fast Quotation?

We support OEM specifications, customized insulation layers, and quick sample delivery.

Zhengzhou LP Industry Co., Ltd.

Email: market@windingwire.net

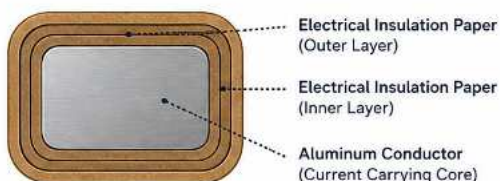
Website: www.lpwindingwires.com

PAPER INSULATED ALUMINUM CONDUCTOR WIRE

USED IN TRANSFORMERS



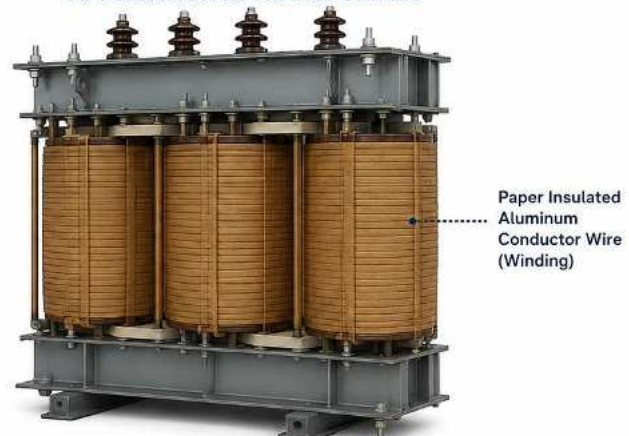
CROSS-SECTION STRUCTURE



FEATURES

- Excellent electrical insulation performance
- High dielectric strength and thermal stability
- Good mechanical strength and flexibility
- Suitable for oil-immersed transformers
- Environmentally friendly and recyclable

APPLICATION IN TRANSFORMER



Widely used in power transformers for windings and connections.