A true seal

Our Winding Wires for submersible motors stay impervious year after year.

Made in Germany

prysmian

NSW

COMMITTED TO QUALITY

Made in Germany.

"By having complete control over the entire production chain – from raw materials to final transport – right here in Germany, we're able to offer our customers highest possible quality in all that we do."

Jürgen Eilers, General Manager, NSW

We've been making high-quality Winding Wires in Germany since 1946. We know what submersible motors are subjected to and produce our wires accordingly. Long experience, vast know-how skills and state-of-the-art technology vow for products excellent in execution. Moreover, within set timeframes our highly-developed R&D team develop and deliver tailor-made solutions including service beyond the ordinary.

It's not for nothing that German Art of Engineering is famous worldwide.

Our Winding Wires for submersible motors stay impervious year after year.

To make sure our Winding Wires keep electrifying your submersible motors for ages, they are rigorously tested, over and over again. The environmental-friendly insulation is free from lead and chlorine while having excellent electrical properties. Add the extra polyamide sheath on our VPE and PE2 wires, and you have a complete offer, always at its best under pressure.

WINDING WIRES

With excellent electrical properties and resilience of the highest quality, the product range is the perfect solution for submersible motors. Being completely impervious to liquids the Winding Wires have proved their worth and reliability for decades.

Our Winding Wires portfolio consists of three types of wires with different properties. The insulation, however, is the same for all types based on an environment-friendly polyethylene free from lead and chlorine.

PE with its hard coated surface is the most suitable product for automatic winding processes and is deliverable from stock.

VPE stands out for a high temperature resistance.

PE2 guarantees the highest application requirements of temperature resistance and electrical properties as well as availability in almost all dimensions. The high mechanical strength is ensured by a thin outer layer of polyamide (PA).

MAIN FEATURES

- Long-lived thanks to a special radiation cross linking process
- Includes no lead or chlorine
- High temperature resistance
- 100 % final tested
- Additional sheath on VPE and PE2 for extra protection

Long-lived and stable performance.

PE2/PA is perfect for sensitive application such as cooling systems in power plants.

PROPERTIES

Conductor design

Solid conductor
- Diameter 0.8 to 4.6 mm
- Cross section 0.5 to 16.60 mm²

Stranded conductor
- Diameter 3.6 to 17.1 mm
- Cross section 8.00 to 150.00 mm²

Insulation

- Environment-friendly polyethylene
- Free of lead and chlorine (<0.1 % by weight)
- Excellent electrical properties
- Wall thickness depends on op. voltage 0.3 to 3.5 mm

PA-sheathing for PE2 and for VPE insulated wires

- Additional sheath made of polyamide for surface protection
- Thickness 0.1 to 0.3 mm

Semiconducting layer (HL)

- Between copper conductor and PE2 insulation
- For high voltage applications
- Thickness 0.1 to 0.3 mm

Applications

- Agricultural irrigation systems
- Water supply
- Booster stations
- Firefighting systems for oil and gas platforms
- Dewatering of mines
- High voltage applications
- Deep sea applications
- Circulation pumps in power plants

Product range/Characteristic				
Type	Application temperature	Specific insulation resistance	Colour	Method of cross linking
PE	70 °C	10^{16} Ω×cm	white	none
VPE, VPE/PA (XLPE/PA)	80 °C	10^{16} Ω×cm	nature	chemical
PE2/PA*	90 °C	10^{18} Ω×cm	nature	physical

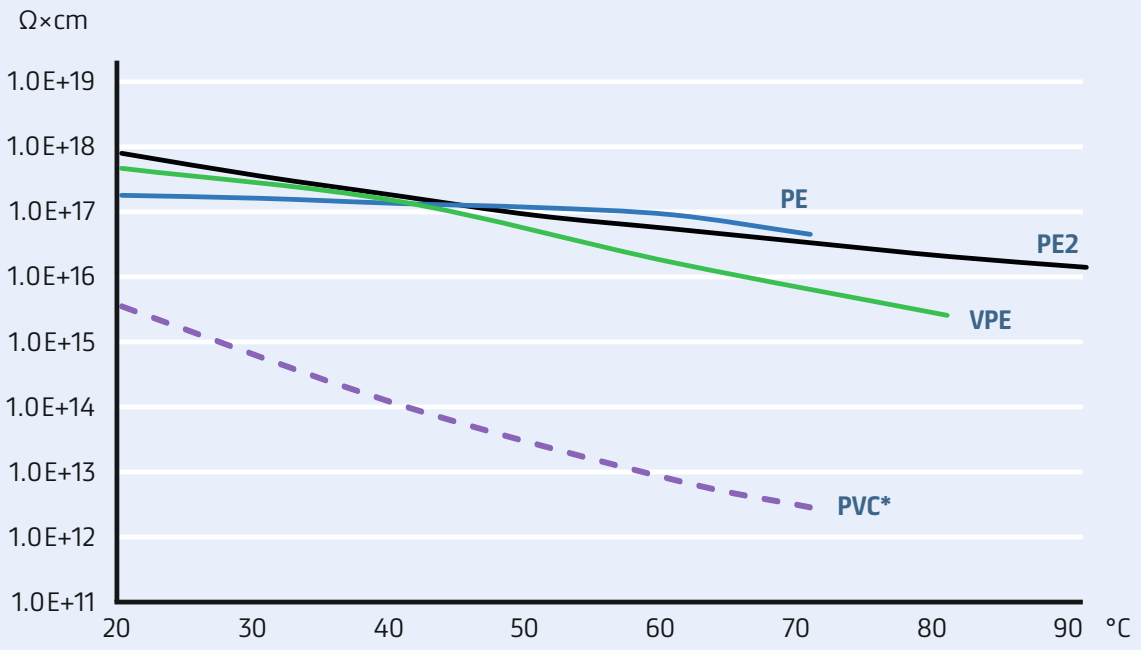
* HL/PE2/PA for high voltage applications.

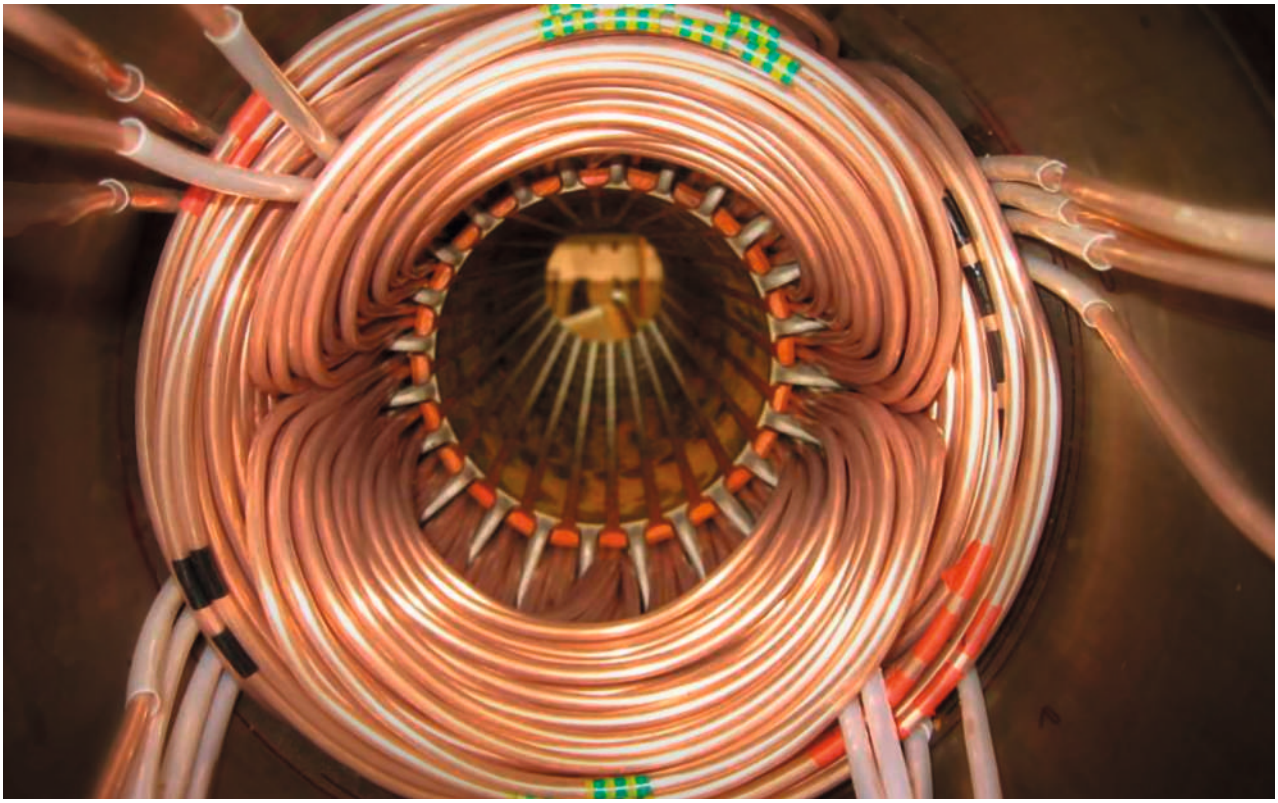
Electrical properties of NSW Winding Wires

Specific insulation resistance p; Ω×cm

Inter-/extrapolated indicative values – for information only.

*PVC is substituted by polyethylene, free from lead and chlorine.





Motors for special applications with PE2/PA insulated Winding Wires.

TRIED AND TESTED

You can rest assured that we always work in accordance with national and international test standards. In order to assure the quality, we expose both material and products to intensive, long-term trials. The continuous checking, monitoring and evaluation are put in place to ensure your motors will experience trouble-free operations and long-lasting longevity.

Final testing

We conduct dimension and mechanical routine tests at room temperature including:

- Diameter
- Wall thickness
- Eccentricity
- Surface characteristics

High voltage routine testing is performed in mains water bath, alternating voltage (50 Hz) and ambient water temperature. This testing is in compliance with the NSW Quality Plan. Customized specification can be applied. A Test Certificate 3.1 is available on demand (DIN EN 10204).

Type tests

At regular intervals, samples of wires are taken from the current production batch and subjected to type testing. This includes a testing and validation of:

- Specific insulation resistance
- Instantaneous breakdown voltage
- Instantaneous breakdown field strength

Regardless of whether standard or customer-specific requirements, we advise and support our customers worldwide and ensure the quality of our products according to the common industry standards ISO 9001, ISO 14001, ISO 45001 and ISO 50001 based on regular audits.

ISO 9001

ISO 14001

ISO 45001

ISO 50001

ENVIRONMENTALLY FRIENDLY

MADE IN GERMANY

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The planet's pathways

NSW

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