



ELSCHUKOM

leads to new ideas.

WIRE COMPOSITIONS INSULATED

WHEN DIFFERENT MATERIALS GO TOGETHER FOR YOUR PRODUCT

at **ELSCHUKOM** you will benefit from various options to obtain individually selected wire materials with an insulating coating.

we usually use pure metals, alloys or also composite materials as base materials.

we classify the composite wires according to their manufacturing process.

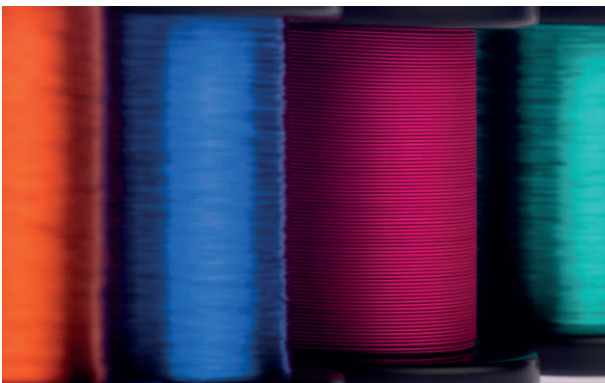
ENAMEL-INSULATED.

typically, enamelled wires are manufactured in a continuous process.

depending on requirements, the following base coats are used:

- polyurethane (PU)
- polyesterimide (PEI)
- polyamidimide (PAI)
- polyimide (PI)

these can be provided with an additional „self-bonding“-layer as required.



the requirements which are generally valid for enamelled copper wires are equally tested at **ELSCHUKOM** for various base materials.

- **mechanical:** tensile strength, elongation at break
- **electrical:** electrical resistance, breakdown voltage
- **chemical:** solderability, chemical resistance
- **thermal:** application temperature, thermal shock, thermal pressure
- **optics:** enamel colour
- **haptics:** surface condition

in the enamelling process, the wire is coated in several passes to apply the desired thickness of the enamelled layer. doing so, the required properties are adjusted precisely.

PLASTICS-/ EXTRUSION COATED.

an alternative to enamel-insulated wires is sheathing with plastics such as polytetrafluorethylene (PTFE), polyetheretherketone (PEEK) and polyethylene (PE). usually the coating is applied via an extrusion process.

different layer thicknesses are possible.

when designing insulating properties, we naturally keep the challenge of contacting for your wire composition in mind.

we will be happy to provide you with advice and develop a suitable solution together with you for your application.

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DELIVERY TYPE.

we are happy to offer you our insulated wires also in very small quantities.

coil design

diameter in mm	recommended coil	recommended weight per coil in g
0.050 – 0.100	HKK76	100 – 250
0.100 – 0.250	K100	500 – 1500
0.200 – 0.500	HKV125	1500 – 2000
0.250 – 0.800	K160	5000 – 6000

(ELSCHUKOM standard, special solutions possible on request)

you will certainly find the perfect base material for your enamel-insulated wire in one of our information sheets. have a look at „**ELCu**“, „**ELCON**“, „resistance alloys“ and „coated wire compositions“.

flexibility in coil designs with regard to wire length as well as the application of a paraffin coating are just two of the options to provide for the best unwinding results in your subsequent processing. we will be happy to recommend you the optimum procedure for proper handling.

each base material for enamel-insulated wires is selected specifically according to its characteristics for your wire solution. By applying a special insulating layer we enhance and extend the properties of the wire composition.

in this selection process, your application is our priority.

typical areas of application are, among others:



FUSES.



SENSORS.



HOME ELECTRONICS.



TEXTILE INDUSTRY.



FLAT WIRE.



STRANDED WIRES.



MUSICAL INSTRUMENTS.



HEATING WIRES.



JEWELLERY.

if you would like to learn more about our insulated wire compositions, please do not hesitate to contact us:



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