

# **Material Information Card Enamelled Winding Wire**

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This information sheet is not a Safety Data Sheet, since our wires are only articles according REACH. They are neither Substances nor Components, and require no SDS. This information sheet is intended to give guidance to the user on any potential health, safety and environmental question associated with the use of this material. The information has been standardised within all European Manufacturers, members of EWWG: Europacable Winding Wire Group

### We declare that the Material conforms to the Environmental Specifications, as listed in the Ecodeclaration below

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ENVIRONMENTAL MANAGEMENT SYSTEMS	<b>DIN EN ISO14001</b> Certificate No: 004273 UM dated 2008-03-30
MATERIAL	MAGNEFORM F-120, MAGNEBOND FX-120, MAGNEBOND FX2-120
MATERIAL DESIGNATION	Polyvinyl acetate enamelled wire (with or without Epoxy self bonding layer)
IEC STANDARDS	IEC 60317 -12, -14, -17, -18
PURPOSE	For use only as winding wires for electrical applications
CHEMICAL COMPOSITION	The film is a modified Polyvinyl acetate on a copper conductor. As a bond coat a layer of Epoxy can be added. In the case of round wires the surface is coated with an extremely thin layer of paraffin wax, beeswax or ester wax.  Substrate: electrolytic copper 99.95 % purity.  The material does not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenylether (PBDE) according to European Union Directive 2011/65/EU (RoHS) and pentaBDE, octaBDE according to European Union Directive 2003/11/EC.
WEIGHTS AND DIMENSIONS	Double coat wire: wire with base coat insulation plus overcoat insulation.  Substrate: from 95 to 99.3 % in weight (average 97.5 %)  Base coat insulation: from 0.6 to 4 % in weight (average 2.0 %)  Overcoat insulation: from 0.1 to 1 % in weight (average 0.5 %)
PHYSICAL PROPERTIES	Solid material - stable up to its recommended maximum operating temperature of 120°C, for a minimum life of 20,000 hours.  Resistivity at 20 °C: Copper 0.0172413 Ωmm²/m, aluminum 0.027898 Ωmm²/m
HEALTH HAZARDS	There are no known health hazards associated with this material when used for its specified purpose. If the enamel film is burnt or soldered degradation products may be evolved which may require local exhaust ventilation.
FIRE PRECAUTIONS	In normal conditions of storage this material will not initiate nor support combustion.  If this material is involved in a fire, the plastic spools, pallets and other packaging are combustible and may give off toxic fumes.
HANDLING USE / PRECAUTIONS	As this material is used in other manufacturing processes it is important that any safety devices on the winding machines are used in accordance with the manufacturers' instructions. Particular attention should be paid to subsequent operations such as soldering and bonding, local exhaust ventilation should be used if required. Care should be taken to prevent cuts from any sharp edges on the wire. When de-reeling, care should be taken to ensure that any loose ends from the end of the reel or from a wire break do not fly out and cause laceration injury. Care should also be taken to ensure that trapped wires do not cause the reel to be pulled up out of position. On site risk assessments should be carried out to determine the safe way of handling reels or packages containing wire.
OCCUPATIONAL EXPOSURE STANDARDS	Only for Polyurethane coatings: Isocyanate will be evolved during burning or soldering and is a potential sensitizer. For the exposure limits please refer to the applicable values of each Country.
	No relevant standards for all the other coatings.



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## TRANSPORTATION / STORAGE CONDITION

Enamelled Winding Wire is not subject to any specific provisions within the European Community.

Care should however be taken to ensure that all loads are secured and unable to move during transportation.

The storage temperature should not exceed 60  $^{\circ}$ C. High humidity, condensation water or aggressive agents should be avoided. Recommended conditions are 25  $^{\circ}$ C at 60  $^{\circ}$ 6 humidity and no direct solar radiation.

Under optimum storage condition the minimum shelf life for polyvinyl acetate enamelled wires are 3 years. In the case of a self bonding wire with an Epoxy coat the shelf life is 6 month. These are standard values, after exceeding the time limit the properties of the wire have to be tested before use.

## DISPOSAL PRECAUTIONS

- a) Winding wires are used with other materials to form a component which is part of many different electrical equipment/apparatus. As far as the Directive on Electrical and Electronic Waste (WEEE 2002/96/CE) is concerned, it is the End of Life of the Electrical and Electronic Equipment/Apparatus that is important. The winding wire producers do not have a direct influence on the life of the equipment / apparatus.
- b) Winding wires are not equipment according to Directive WEEE 2002/96.

  The winding wire producers shall not be charged with the responsibility and the cost of recycling.
- c) Only for information the winding wires producers suggest to the owner of the enamelled wires this environmental-friendly way of recycling the enameled copper wires coming from production waste, customer production waste or end of life of electric-electronic apparatus:
  - 1)To separate the metal wire from the packaging or support.
  - 2) To send the metal waste to the metal refinery in order to recover metal.
  - 3) To send the packaging materials to the packaging producers for recycling.
- d) Wastes of enamelled wires are considered by the current Regulations "recyclable materials" (not dangerous waste).

The Eurocode concerning enamelled wires are:

16.01.18 non-ferrous metal

17.04.01 Copper, bronze and brass

17.04.02 Aluminum

The Eurocode concerning the packaging are:

15.01.01 Paper and cardboard packaging

15.01.02 Plastic packaging

15.01.03 Wooden packaging

15.01.04 Metallic packaging

15.01.05 Composite packaging

15.01.06 mixed packaging

#### **COMPANY ADDRESS**

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This information is presented in good faith and is based on knowledge of the materials in January 2013