

Magnekon Soldacon-N®

Magnet Wire



A Viakable Company

Description

The SOLDACON-N® magnet wire is manufactured by applying a Polyamide (Nylon) coat over the base insulation of SOLDACON® (Polyurethane) wire. This results in a magnet wire insulation that combines the excellent electrical and solderability characteristics of the SOLDACON® wire, with the tenacity, winding ease, and scrape resistance of the Polyamide (Nylon) overcoat. It can be used in applications such as serial armatures, toroids, bobbin windings, or in those cases where winding ease and solderability is required.

This product is manufactured in three insulation builds – Single, Heavy and Triple, and is offered in either Copper or Aluminum conductors.

The SOLDACON-N® magnet wire is recommended for use in electrical equipment with a thermal class of up to 180 °C.

UL Designation	Thermal Class	NEMA MW-1000
SNP 180	180 °C	MW 83
SPNH 155 *	155 °C	MW 80
SNE 155	155 °C	MW 80
SN 155	155 °C	MW 80
SN 130	130 °C	MW 28

Specifications

Meets the requirements set forth in the following standards:

- NMJ-J-483.
- NEMA MW 1000, MW 28, MW 80 and MW 83.
- IEC-60317-19 and IEC-60317-21.
- UL recognition under file E102627.

Characteristics

- Resistant to high temperatures.
- Solderability without the need to remove the insulating film.
- Excellent winding ease.
- Excellent electric characteristics.
- High resistance to thermoplastic flow.
- Is compatible with most impregnation varnishes.
- High resistance to abrasion.
- Resistant to heat shock.
- Pinhole free, under specific requirement.

Range of Gauges

Copper Conductors		
Insulation Build	AWG	mm
Single	8 - 46	3.264 - 0.040
Heavy	8 - 44	3.264 - 0.050
Triple	14 - 40	1.628 - 0.080

Aluminum Conductors		
Insulation Build	AWG	mm
Single	15 - 30	1.450 - 0.255
Heavy	20 - 30	0.812 - 0.255

Principal Applications

AUTOMOTIVE

- Alternators.
- Field coils.
- Starter motors.

ELECTRONICS

- TV yoke coils.
- Horizontal output (Fly back) transformers.
- Inductors (Choke).

APPLIANCE WIRING

- Small motors in general.

SPECIAL TRANSFORMERS

- Ballasts.
- Measurement coils.
- Small transformers, electrical machines, controls.

LOW POWER AND FRACTIONAL MOTORS

- Open.



Technical Data

Soldacon-N[®] TYPICAL TEST VALUES FOR A SOLDACON-N[®] HEAVY 18 AWG WIRE.
Typical values only, not intended to be used as a specification.

Test	Specification (ANSI / NEMA MW 1000) MW 83-C	Test Method	Typical Results
Electrical			
Dielectric Strength	≥ 5130 V	NEMA	10100 V
Continuity	≤ 5 discontinuities per 100 feet @ 1500 V	NEMA	0 (Zero)
Mechanical			
Elongation	Gradual elongation until rupture, 32% minimum.	NEMA	36%
Adherence and Flexibility	20% sudden jerk, rolled 10 turns around a mandrel 3 times the diameter of the wire, visual inspection, no cracks or exposed conductor.	NEMA	Passed
Springback	≤ 58 °	NEMA	54 °
Unidirectional Abrasion	Average of 3 measurements @ 0°, 120° and 240°; ≥ 1150 grams.	NEMA	1300 grams
Chemical			
Pinhole*	Not specified	JIS C3003	0 (Zero)
Solderability	Maximum immersion time, 10 seconds @ 430 °C.	NEMA	6 seconds @ 390 °C
Solubility	Not softened sufficiently to expose the bare conductor.	NEMA	Passes
Thermal			
Thermal Stability	20000 hours @ 180 °C	ASTM	180 °C
Heat Shock	20% sudden jerk, rolled 10 turns around a mandrel 3 times the diameter of the wire, before heating for ½ hour @ 200 °C.	NEMA	Passes
Thermoplastic Flow	≥ 225 °C	NEMA	290 °C

* Pinhole free under specific requirement.