

CATALOG

MAGNET

Wire

2007

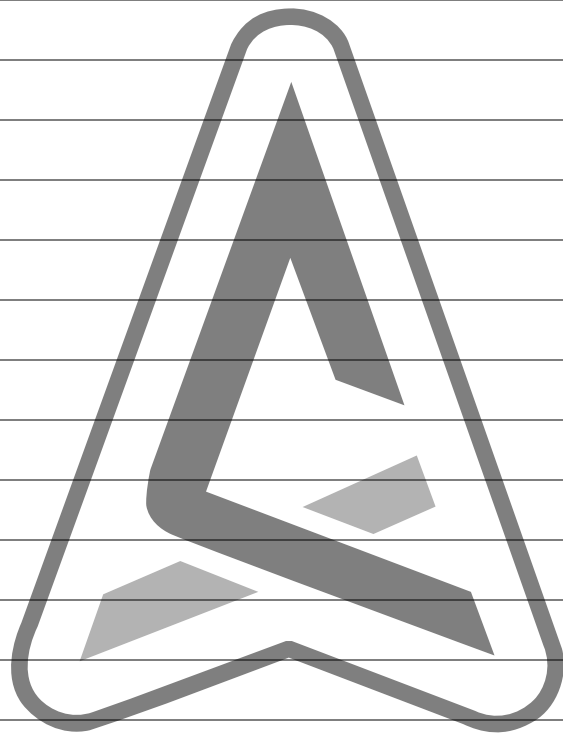
TECHNOLOGY



National
Technology
Award
2002



NOTES:



CONDUMEX



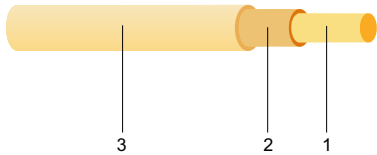
MAGNET WIRE

1. BARE, ENAMEL OR JACKETED AND SHAPED WIRES

- Polisodanel Nylon 2
- Amidanel 3
- Universanel 4
- Ultranel 5

MAGNET WIRE

POLISOLDANEL™ NYLON 155°C



DESCRIPTION

1. Solid circular soft copper conductor.
2. Insulation based on modified polyurethane resin.
3. Polyamide overcoat (nylon).

APPLICATIONS:

- Motors for household appliances.
- Low voltage transformers.
- Relays, coils for electronic applications, encapsulated coils.
- Ballasts.

THERMAL CLASS:

- 155°C, class F

PROPERTIES:

- Good resistance to solvents used in impregnating varnish, encapsulants, and bonding agents.
- Excellent windability.
- POLISOLDANEL™ NYLON combines good mechanical characteristics (abrasion resistance, with excellent flexibility), and fast soldering.
- Excellent flexibility.

GENERAL RECOMMENDATIONS:

- Do not use POLISOLDANEL™ NYLON for applications subject to excessive moisture conditions.
- Do not use POLISOLDANEL™ NYLON for applications where the product will be exposed to overload.
- Immerse wire ends in a flux, preferably neuter, before immersing in soldering.
- The following temperatures are recommended for the soldering process, using the times shown:
 - 14 to 19 AWG: 430° C, 10 sec.
 - 20 to 23 AWG: 430° C, 8 sec.
 - 24 to 29 AWG: 390° C, 6 sec.
 - 30 to 36 AWG: 390° C, 5 sec.
 - 37 to 46 AWG: 390° C, 4 sec.
 - 47 to 52 AWG: 360° C, 3 sec.

SPECIFICATIONS:

The product may be designed according to any of the following standards*:

- IEC 60317-21
- NMX-J-483
- NEMA MW 80-C

*If compliance with a different specification is required, please contact our Sales Department.

COLORS:

- Red (typical)
- Green and amber
- Blue (14 to 52 AWG)

CERTIFICATION:

- Quality system certified by:
- Underwriters Laboratories Inc. File E 87331

ORDERING INFORMATION:

- POLISOLDANEL™ NYLON magnet wire, gauge, construction (single or double), quantity and packing.

Note: For product manufacturing in aluminum, please contact our Sales Department.

ROUND POLISOLDANEL™ NYLON MANUFACTURING RANGE

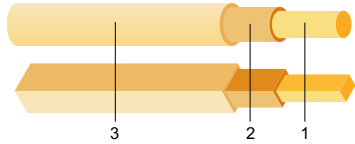
COLOR		SINGLE	DOUBLE
Red (Typical)	Gauge	14 to 52 AWG	14 to 44 AWG
	Conductor Diameter	0.0198 to 1.613 mm (0.00078 to 0.0635")	0.048 to 1.613 mm (0.0019 to 0.0635")
	Blue	Gauge	14 to 52 AWG
Green and Amber	Conductor Diameter	0.0198 to 1.613 mm (0.00078 to 0.0635")	0.048 to 1.613 mm (0.0019 to 0.0635")

Approximate data subject to normal manufacturing tolerances.



MAGNET WIRE

AMIDANEL™ 200°C



DESCRIPTION

1. Round, square or rectangular soft copper conductor.
2. Insulation based on a modified polyester resin.
3. Amide imide resin overcoat.

APPLICATIONS:

- Open motors.
- Enclosed motors.
- Airtight motors.
- Dry-type transformers.
- Automotive coils.
- Ballasts.
- Motors for portable tools.

THERMAL CLASS:

- 200° C, Class N

PROPERTIES:

- Excellent thermal stability, excellent dielectric and mechanical properties, very good chemical resistance to common solvents and coolants.
- AMIDANEL™ is chemically resistant to Freon 12 and 22.

GENERAL RECOMMENDATIONS:

- Do not use for applications subject to excessive moisture conditions.
- AMIDANEL™ is not a solderable product.

COLORS:

- Amber (typical).
- Green.
- Blue (14 to 30 AWG).

SPECIFICATIONS:

The product may be designed according to any of the following standards*:

- IEC 60317-13 and IEC 60317-29
- NMX-J-482, 482, 485 and 489
- NEMA MW 35-C, 36-C and 73-C

*If compliance with a different specification is required, please contact our Sales Department.

CERTIFICATION:

- Quality system certified by:
- Underwriters Laboratories Inc. File E 87331

ORDERING INFORMATION:

- AMIDANEL™ magnet wire or square or rectangular, gauge, dimensions (for soleplates), construction (single, double), color, quantity, and packing.

ROUND AMIDANEL™ MANUFACTURING RANGE

COLOR		SINGLE	DOUBLE
Amber (Typical)	Gauge	14 to 44 AWG	4 to 44 AWG
	Conductor Diameter	0.048 to 1.613 mm (0.0019 to 0.0635")	0.048 to 5.138 mm (0.0019 to 0.0635")
Amber (Hermetic)	Gauge	-----	14 to 30 AWG
	Conductor Diameter	-----	0.0099 to 0.635 mm (0.00078 to 0.0177")
Blue and Green	Gauge	14 to 30 AWG	
	Conductor Diameter	0.252 to 1.613 mm (0.0099 to 0.0635")	

AMIDANEL™ SHAPED MANUFACTURING RANGE

Reference	Dimensions			
	Minimum		Maximum	
	mm	in	mm	in
Thickness	1.0	0.040	5.2	0.204
Width	2.5	0.100	14.0	0.551

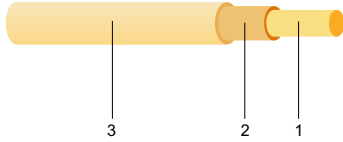
Maximum	Maximum Area	
Width/Thickness Ratio (1)	6 mm ²	0.0625 in ²

(1) The width/thickness ratio is nondimensional.
Approximate data subject to normal manufacturing tolerances.



MAGNET WIRE

UNIVERSANEL™ 200°C



DESCRIPTION

- 1.Round, square or rectangular soft copper conductor.
- 2.Insulation based on NOMEX paper tape (aromatic polyamide), applied with a helicoidal pattern.

APPLICATIONS:

- Oil-type transformers.
- Dry-type transformers.
- Airtight motors.
- Open motors.
- Automotive coils.
- Ballasts.
- Tool motors.
- Large toroidal coils.

THERMAL CLASS:

- 200° C, Class N

PROPERTIES:

- Excellent thermal stability, excellent dielectric and mechanical properties, very good chemical resistance to common solvents, coolants and mineral dielectric oils.
- UNIVERSANEL™ is chemically resistant to freon 12 and 22.
- Ideal for applications subject to excessive moisture conditions.

COLOR:

- Amber (typical)

SPECIFICATIONS:

The product may be designed according to any of the following standards*:

- IEC 60317-1 and IEC 60317-13
- NEMA MW-15-C
- NEMA MW-35-C
- NEMA MW-73-C

*If compliance with a different specification is required, please contact our Sales Department.

CERTIFICATION:

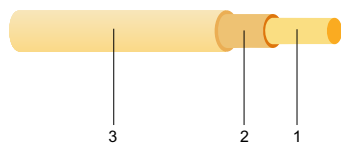
- Quality system certified by:
- Underwriters Laboratories Inc. File E 87331.

ORDERING INFORMATION:

- UNIVERSANEL™ magnet wire, gauge, double construction, quantity and packing.

ROUND UNIVERSANEL™ MANUFACTURING RANGE		
COLOR		DOUBLE
Amber (typical)	Gauge	4 to 30 AWG
	Conductor Diameter	0.252 to 5.138 mm (0.0099 to 0.2023")

Approximate data subject to normal manufacturing tolerances.



MAGNET WIRE

ULTRANEL™ 200°C

DESCRIPTION

1. Soft copper round conductor.
2. Insulation based on imide polyester resin.
3. Modified amide imide resin overcoat.

APPLICATIONS:

- All types of AC motors, where speed is controlled by speed variators (frequency), IGBT inverters and electronic devices with PWM (Pulse Width Modulation) technology.
- High frequency transformers.

THERMAL CLASS:

- 200° C, Class N

PROPERTIES:

- Higher durability in applications with frequency variators vs. traditional magnet wire.
- Excellent resistance to solvents and various chemical substances.
- Excellent thermal stability.
- Adequate electrical and mechanical properties for the processes and equipments used f design.
- Excellent resistance to high voltage and frequency cyclic pulses.
- Excellent resistance to corona effect.
- Low friction factor, easy slot filling.
- High resistance to abrasion.

COLOR:

- Brown

GENERAL RECOMMENDATIONS:

- Do not use for applications subject to excessive moisture conditions.
- Comply with minimum curvature radius and mechanical pulling stress in winding processes.

SPECIFICATIONS:

The product may be designed according to any of the following standards*:

- NEMA MW 1000 35-C
- Internal Condumex specification for evaluation of pulse resistance.

*If compliance with a different specification is required, please contact our Sales Department.

CERTIFICATION:

- Quality system certified by: UL E87331

ORDERING INFORMATION:

- ULTRANEL™ magnet wire, gauge, double construction, quantity and packing.

ROUND ULTRANEL™ MANUFACTURING RANGE		
COLOR		DOUBLE
Brown	Gauge	14 to 22 AWG
	Conductor Diameter	0.635 to 1.613 mm (0.0250 to 0.0635")

Approximate data subject to normal manufacturing tolerances.



CONDUMEX

Grand Prairie, Texas
800-925-9473