

MAGNEBOND® CAB-200

Properties

Magnebond® CAB-200 has the following properties:

- thermal index of 210°C,
- suitable for winding,
- high chemical and humidity resistance.

Magnebond® CAB-200 is bonded under action of heat resulting in a bonded coil similar to trickle resin or impregnated coils;

It has also a high temperature bonding strength.

Insulation

Magnebond® CAB-200 is a polyesterimide (THEIC) enameled copper wire overcoated with polyamide-imide. The final layer is a polyamide aromatic bondcoat.

Application

Magnebond® CAB-200 is designed for the production of self-bonded, electromagnetic components, produced without impregnation.

Bonding the coil is rapidly achieved in the production line resulting in higher productivity.

Applications:

Motors: fields and armature, dry type transformers and inductive coils.

Production range

The standard are:

Diameter:	0.12 to 1.40 mm
Thickness:	Grade 1B and Grade 2B
Color:	Natural, red and green.

Using conditions

The key conditions to be respected are as following:

- optimum bonding temperature between 190 °C and 230 °C,
- accurate quantity of energy,
- minimum tightening pressure between the elements of coil being bonded.

Bonding the coils can be achieved by the joule-effect heating technique. The values for the intensity and voltage to be applied to the ends of a coil, can be determinated as follows:

$$70 M = RI^2 t$$

M = mass of wire in grams

R = resistance in Ohms

I = intensity in Amperes

t = length of time in seconds

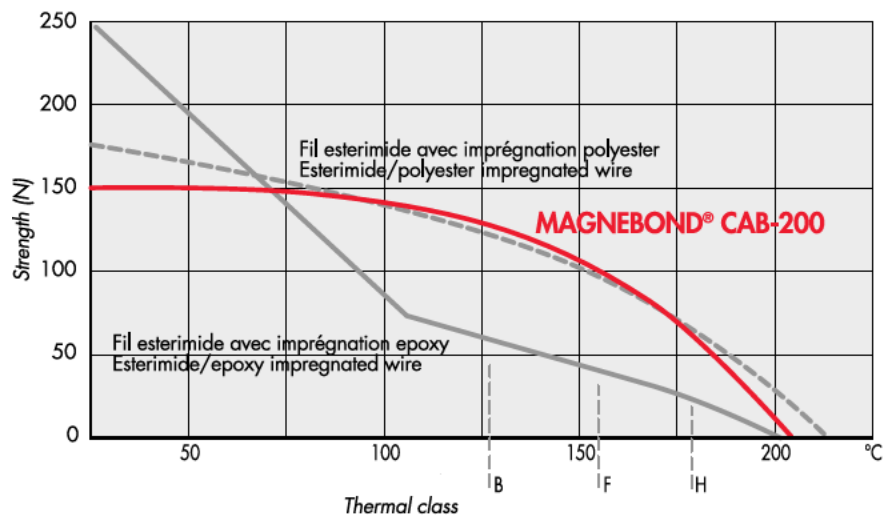
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Valeurs typiques d'un fil Magnebond® CAB-200 mesurées selon les normes CEI 60 851	Typical values for a Magnebond® CAB-200 sample according to IEC 60 851 standards	
Diamètre du conducteur Diamètre sur émail Isolation de base Surcouche Couche thermo-adhérente	0,400 0,456 Polyesterimide (THEIC) Polyamide-imide Polyamide aromatique	Conductor Diameter Overall Diameter Basecoat Overcoat Bondcoat
Principales caractéristiques		Main characteristics
Indice de température	210°C	Thermal index
Durée de vie de 5000 h à	230°C	5000 h life test
Choc thermique	OK at 240°C	Heat shock
Thermoplasticité	≥ 340°C	Cut through temperature
Tension de claquage	≥ 1,5 x IEC values	Breakdown voltage
Flexibilité	15 % + 1 diam.	Flexibility
Allongement	40 %	Elongation
Tangente Delta (isolation de base)	≥ 190°C	Dielectric loss factor (basecoat)
Température de ramollissement (Méthode CEI 60 851-3/7-1 sur bobinage hélicoïdal)	200°C	Resoftening Temperature (According to helical coil test IEC 60-851-3/7-1)

These values are for information only.

Bond strength according
to the temperature
(IEC 60851-3/7-2)



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THERMAL ENDURANCE GRAPH - TEST VOLTAGE

MAGNEBOND® CAB-200
Nominal diameter 0,400 mm
Increase in diameter due
to the insulation 0,034 mm
Test voltage 400 V
100

