- TECHNICAL DATA SHEET -

AQUA THERM BC-365
CLEAR BAKING VARNISH CLASS 180°C

DESCRIPTION

Aqua-Therm BC-365 in a water soluble polyester modified varnish having an excellent stability in the tank.
This environmentally friendly varnish was especially developed for containing the S.O.V. emission inside the limits foreseen by the laws in force.
It has the following outstanding features:

- Excellent moisture resistance.
- Excellent adhesion and flexibility.
- Excellent stability.
- Relatively fast cure cycles.
- High Flash Point (over 95°C).
- U.L. Recognition – ASTM D-3251 – Twisted Pairs Class H 180°C – Helical Coil Class 200°C.

Recommended uses

This flexible, moisture and high-temperature resistant varnish is an excellent choice for electrical devices, such as:

Stators	Transformers	Brakes
Wound Coils	Low an medium speed rotors	

CHARACTERISTICS

Physical properties

Color	clear amber
Specific Gravity at 25°C	1.100±50
Percent solid content	47% ±2
Build up, D.F.T. (ASTM D-155-55)	0,025/0,050mm.
Baking time on a copper strip at 150°C (ASTM D-155-55)	15-20'
Viscosity, Ford Cup n.4 at 25°C	150-400"
Thinner	Tap water
pH	8-10
Flash Point (Seta Closed Cup)	over 95°C

Electrical Properties

Dielectric Strength, ASTM D-115	over 3000 Volts/mm.0,025

Mechanical Properties

Bond Strength (Helical Coil Test) ASTM D-2519 at 25°C	Kg. 14,0 to break
Bond Strength (Helical Coil Test) ASTM D-2519 at 155°C	Kg. 4,5 to break

(Test performed on a polyester amide-imide wire. Curing time of the impregnated coils: 6h. at 150°C)

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APPLICATION

The following cycle is suggested as a starting point in the treatment of most units:

1. Dilute Aqua-Therm BC-365 to the desired viscosity, thinning it with drinkable water.
   The recommended dilution is: about 50 parts of tap water to 100 parts of varnish. We recommend to add the water slowly, stirring well. Otherwise, Aqua-Therm BC-365 could get a whitish colour but, anyway, without losing no-one of its properties.
2. Dip the units into the varnish for 5-10' (until bubbling stops).
3. Drain for 30-60'.
4. Bake in the oven choosing one of the following cycles:

4 - 5 h. at 135°C	2 - 3 h. at 150°C	1,5 - 2 h. at 160°C

(Times must be taken when unit reaches the baking temperature.)

GENERAL PROPERTIES

Compatibility with magnet wire coatings

AQUA THERM BC-365 is compatible with the following magnet wire coatings:

Polyvinyl – Formal	Polyester Amide-Imide	Amide-Imide
Polyurethane-Polyamide	Polyester	Polyimide

Thermal class

Aqua Therm BC-365 has a heat resistance of 20.000h. at 180°C, as determined according to ASTM D-3251 standards (twisted pairs).

Dip tank stability

Aqua-Therm BC-365 is slightly alkaline. The pH must be kept between 8 and 10.Periodic checks should be made with a pH meter and, when necessary, we recommend to adjust the pH by adding small quantities (0,5-1%) of Dolph's T-362 pH Adjuster to bring it back to the standard values.

Warning: All the information and application instructions concerning this product are based on technical specifications that we consider reliable, and are provided by way of example, according to our application experience. They do not establish any guarantee but only represent a starting point subject to alterations, according to the application and the kind of material to be treated. Before the product's use the utilizer must determine the suitability for the intended use undertaking all risks and responsibility for whatever may happen in connection with the application. The producer and/or seller will not be considered responsible for any accident, loss or damage (immediate or consequent) originating from the use and/or the inability to use the concerned product. Albesiano Sisa Vernici srl reserves the right to change or modify at any time and without any notice the technical specifications of the product described in this data sheet.

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