



Technical data sheet

Varnish

AQUA-THERM BC-367@

- Impregnation water-based insulating varnish
- UL approved (file OBOR2.E317427 et OBJS2.E317429)
- Good moisture resistance
- Good adhesion and flexibility
- Good stability into the dipping tank (at T >+5°C)
- Relatively fast curing cycles
- Low curing temperature (110 – 130°C)
- High Flash Point (over 95°C)
- Suitable for the impregnation of motors working in humid environments

Description

This environmentally friendly varnish was developed for definitely reducing the V.O.C. emissions in the atmosphere, and for matching the needs of stators and transformers manufacturers that cannot exceed the temperatures of 110-120°C during the curing cycle because of the used special materials (pvc, nylon, sleeveings, faston, caps...). AQUA-THERM BC-367@ is compatible with most of the magnet wires available on the market. We suggest running tests on the simple polyurethane coating only, being it the less resistant coating among all.

Application

Impregnation of small and medium size stators, small transformers, coils.

Processing guidelines

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

Dilute AQUA-THERM BC-367@ to the desired viscosity, thinning it with drinkable water.

1. The recommended dilution is AQUA-THERM BC-367@ 100 parts by weight. + tap water 30-40 pbw
2. Dip the units into the varnish for about 5'.
3. Let it drain for 30'
4. Bake in the oven according to one of the following cycles: 5-8h @ 110°C, 3-5h @ 130°C, 2-4h @ 150°C (times must be taken after units reach the curing temperature)

For specific application feel free to contact us.

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BC367

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The stability of the product into the tank can be indefinitely extended by monthly additions of fresh varnish in a proportion of at least 15-20% on the tank content. We recommend to keep the pH value not below 6.7

Storage

12 months at +5- to +30°C in the closed original container. Being a water-based varnish, protect from frost.

Health and safety

Our products are intended for industrial use only. For any further information, refer to the Safety Data Sheet.

Physical properties	Test norm	Unit	Value
Colour			White
Specific gravity @ 25°C		g/l	990-1050
Viscosity FORD Cup 4 @ 25°C		seconds	12 - 16
Viscosity ISO Cup 3 @ 25°C		seconds	20 - 40
pH			7.2 - 8.2
Flash point	SETA closed cup	°C	>95
Electrical properties	Test norm	Unit	Value
Dielectric strength @ 25°C (25µm)	ASTM D-115	KV/mm	>80
Mechanical properties	Test norm	Unit	Value
Bond strength (MW35, double impregnation, 2h@150°C)	IEC61033B (helical coil)		@ break
	@ 25°C	N	>180
	@ 155°C	N	>50
Thermal properties	Test norm	Unit	Value
Thermal class UL 1446	Twisted pairs – MW35-C	°C	180

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