



# TECHNICAL BULLETIN

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### PRODUCT INFORMATION

#### **AQUAMEG 1000**

EPOXY

QUICK CURE

RESILIENT AND FLEXIBLE

EMULSION

“0” VOC

CLASS H (180°C)

FREON RESISTANT

#### **AQUAMEG 1000 CLASS H EPOXY WATER BASED IMPREGNATING EMULSION**

#### GENERAL DESCRIPTION

Aquameg 1000 is a water based epoxy emulsion, which produces a tough resilient film with good electrical properties at all operating temperatures up to Class H (180°C). Where higher class insulation systems are employed this product can be used in components working up to 200°C. Being water based it is non-flammable, low odour, does not require special storage facilities, and allows greater operator safety during processing. The emulsion has a “0” VOC (volatile organic content) giving no environmental emissions. It exhibits excellent penetration through windings with clean drainage and low secondary drainage properties. The cured product has exceptional resistance to chemicals and moisture. The varnish is suitable for use in hermetic and semi-hermetic systems containing refrigerants and compressor oils.

#### APPLICATION

A “0” VOC, environmentally friendly emulsion for the impregnation of transformers, chokes, stators, relays and fields. The material has excellent chemical resistance and is also suitable for hermetic and semi-hermetic pump motors.

#### SPECIFICATION:

VISCOSITY	30-60 cps
NON-VOLATILE CONTENT	38-42 %
SPECIFIC GRAVITY	1.05 - 1.07
SHELF LIFE	12 months at 20°C

**NOTE:** Due to the introduction of improvements from time to time the right is reserved to supply products that may differ slightly from those illustrated or described in this publication.

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#### PROPERTIES OF CURED VARNISH

BOND STRENGTH (ASTM D2519 Helical coil)	20°C	260N
	100°C	130N
	155°C	55N
BREAKDOWN VOLTAGE (ASTM D115- Al panels)	20°C	105kV/mm
	155°C	82kV/mm
	24 hrs immersion in distilled water	100kV/mm
DIELECTRIC CONSTANT	1kHz@ 23°C	3.56
	1kHz @ 150°C	3.59
DISSIPATION FACTOR	1KHz@ 23°C	0.02

#### PROCESSING

METHOD	-	Dip impregnation
VISCOSITY	-	As supplied
REDUCER	-	Tap water

#### CURE PRACTICE

The cure time chosen for impregnation is dependent on the size and type of component, and the oven efficiency. Typical figures are given.

A pre polymerisation of 1-2 hrs @ 90°C is often employed as foaming can be a problem of water based varnishes when exposed to high temperatures.

TIME (hours)	4	3
TEMPERATURE (deg c)	150	165

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#### **WORKSHOP PRACTICE**

Varnish in impregnating tanks should be checked for viscosity on a regular basis to ensure consistent impregnation.

A temperature/viscosity graph is available on request.

Regular additions of fresh varnish to the tank are recommended to maintain stability. A tank turnover of at least 20% per month is recommended, viscosity periodically controlled.

Tank samples will be analysed free of charge by our laboratories.

Emulsion systems are sensitive to frost exposure and the material must be stored and used in frost-free areas.

In dip tanks there is a tendency for emulsion systems to slowly re-agglomerate regular stirring is recommended

**It is recommended that a Stainless Steel or suitably coated tank be used with this product.**

#### **HEALTH & SAFETY**

Refer to Material Safety Data Sheet available.

#### **PACKAGING**

210 ltr, 25 ltr, 5 ltr

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