

# ALKYD PHENOLIC IMPREGNATING VARNISH CLASS H U380 type





# PRODUCT INFORMATION ULTIMEG 2000/380

ALKYD PHENOLIC EXCELLENT ELECTRICAL PROPERTIES HIGH BOND HIGH FLASH POINT CLASS H (180°C) **UL FILE NUMBER E220579** 

## ULTIMEG 2000/380 ALKYD PHENOLIC IMPREGNATING VARNISH CLASS H GENERAL DESCRIPTION

Ultimeg 2000/380 is a high flash, alkyd phenolic which produces tough resilient insulating films with excellent electrical and bond strength characteristics at all operating temperatures up to Class H (180°C). The varnish gives excellent penetration into windings with clean drainage and low secondary drainage properties. The system has excellent tank stability and is well suited for low usage larger tanks. The cured product has exceptionally good resistance to moisture and insulating oils, together with full cure in the deeper sections of windings. Good flexibility is shown around fly leads, and compatibility with all normal insulating systems is achieved. The varnish is also available for use in UL File No E321429 insulation systems AEV155-1 and AEV180-1

#### APPLICATION

A quality general purpose varnish for impregnation of transformers. Chokes, relays and fields, together with most types of electrical motors.

# **SPECIFICATION:**

VISCOSITY	100 - 140 secs B4 flowcup @ 25°C
NON-VOLATILE CONTENT	45 - 50%
SPECIFIC GRAVITY	0.92 - 0.94
FLASHPOINT	40°C
SHELF LIFE	24 months at 20°C

#### PROCESSING

METHOD	-	Cold, hot dip or vacuum impregnation
VISCOSITY	-	Cold Dip Hot Dip Vacuum
		65 - 120 secs 65 - 150 secs
REDUCER	-	AEV ULTIMEG 2000/ T2, T3 or T4

**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.



# **ULTIMEG 2000/380**

## 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.

Solvent loss from the tank can be reduced by keeping the tank lidded when not in use. The inclusion of a condenser and trap is recommended when vacuum techniques are applied.

Regular additions of fresh varnish to the tank are recommended to maintain stability. Tank samples will be analysed free of charge by our laboratories.

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

# **CURE SCHEDULE**

TIME (at temperatures) (hours)	4	2
TEMPERATURE (°C)	130	160

# PROPERTIES ACCORDING TO ASTM

Preparation of specimens:	2 dip	2 dips in reverse, each cured 2 h at 160°C		
BOND STRENGTH ASTM D 115	RT	20.5kg	150°C	1.8kg
DIELECTRIC STRENGT ASTM D 115	FH RT			1660 V/0.01mm
(Copper plate)	24hr water	immersion in at 23°C	1220 V/0.01mm	
WEIGHT LOSS 200°C ASTM D2756 (On glass cloth)	48hr 96hr	7.7% 10.6%		

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#### **ULTIMEG 2000/380** THERMAL ENDURANCE Method ASTM D 1932 on glass cloth, curved electrode 25,000 hours 167°C Intercept According to UL 1446 Intercept 20.000h on enamelled wires WIRE TYPE **Twisted Pair Helical coil** Polyurethane &Nylon (MW-28, class 130) 130 Polyester & Nylon (MW-24, class 155) 155 Polyester imide (MW-30, class 180) 180

Modif. Polyester	(MW-35, class 200)	180	200
& Amidimide			
Polyamide	(MW-16, class 220)	220	180

CHEMICAL RESISTANCE Ultimeg 2000/380 shows outstanding resistance to moisture, salt spray, tropic and arctic conditions (according to MIL-I-24092, grade CB, type M, class 155, specification from U.S Navy) and to corrosive environments. Unaffected after immersion.

ASTM D-115 on copper

panels curing 2 H 150°C	24 h	25°C	Acetone
	24 h	25°C	Xylene
	24 h	25°C	Sulphuric Acid
	24 h	25°C	Caustic Soda
	168 h	25°C	Kerosene
	48 h	110°C	Transformer Oil
	336 h	25°C	Synthetic Lubricants
			SKYDROL 500

HEALTH & SAFETY Refer to Material Safety Data Sheet available.

PACKAGING 210 ltr, 25 ltr, 5 ltr

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155

180

200