



PRODUCT INFORMATION

**ULTIMEG 2000/380HF**

ALKYD PHENOLIC  
EXCELLENT ELECTRICAL PROPERTIES  
HIGH BOND  
FLASH POINT 63°C  
CLASS H (180°C)  
**UL FILE NUMBER E220579, E321249**

**ULTIMEG 2000/380HF ALKYD PHENOLIC IMPREGNATING VARNISH  
CLASS H**

GENERAL DESCRIPTION

Ultimeg 2000/380HF is an 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 material is based in a solvent system that has a flash point of 63°C permitting the material to be transported without flammability precautions. The varnish gives excellent penetration into windings with clean drainage and low secondary drainage properties. Excellent tank stability, with slow evaporation rates mean it 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. Insulation systems are available for use in UL File No E321249 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	130 - 160 secs B4 flowcup @ 25°C 2.75 – 3.25 Poise at 25°C
NON-VOLATILE CONTENT	42 - 47%
SPECIFIC GRAVITY	0.92 - 0.94
FLASHPOINT	63°C
SHELF LIFE	24 months at 20°C



**ULTIMEG 2000/380HF**

**PROCESSING**

METHOD	-	Cold, hot dip or vacuum impregnation		
VISCOSITY	-	<u>Cold Dip</u>	<u>Hot Dip</u>	<u>Vacuum</u>
		65 - 160 secs	65 - 180 secs	
REDUCER	-	AEV ULTIMEG 2000/ T60		

**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**

<b>TIME (at temperatures) (hours)</b>	<b>4</b>	<b>2</b>
<b>TEMPERATURE (°C)</b>	<b>130</b>	<b>160</b>

**PROPERTIES ACCORDING TO ASTM**

Preparation of specimens: 2 dips in reverse, each cured 2 h at 160°C

**BOND STRENGTH**

<b>ASTM D 115</b>	RT	20.5kg	150°C	1.8kg
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**DIELECTRIC STRENGTH RT**

<b>ASTM D 115</b>		166 kV/mm
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(Copper plate)

24hr immersion in distilled water at 23°C

122 kV/mm



**ULTIMEG 2000/380HF**

**WEIGHT LOSS 200°C**      48hr    7.7%  
**ASTM D2756**              96hr    10.6%  
 (On glass cloth)

**THERMAL ENDURANCE**

Method ASTM D 1932      on glass cloth, curved electrode

Intercept                      25,000 hours    167°C

According to UL 1446      Intercept 20.000h      on enamelled wires

**WIRE TYPE**

	<b>Twisted Pair</b>	<b>Helical coil</b>
Polyurethane & Nylon (MW-28, class 130)	130	155
Polyester & Nylon (MW-24, class 155)	155	180
Polyester imide (MW-30, class 180)	180	200
Modif. Polyester (MW-35, class 200) & Amidimide	180	200
Polyamide (MW-16, class 220)	220	180

**CHEMICAL RESISTANCE**

Ultimeg 2000/380HF shows outstanding resistance to moisture, salt spray, tropic and arctic conditions (according to MIL-I-24092, grade CB, typeM, class155, 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



**ULTIMEG 2000/380HF**

**HEALTH & SAFETY**

Refer to Material Safety Data Sheet available.

**PACKAGING**

210 ltr, 25 ltr, 5 ltr

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