



PRODUCT INFORMATION ULTIMEG 2000/380HF

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

#### 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 E321429 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 NON-VOLATILE CONTENT SPECIFIC GRAVITY FLASHPOINT SHELF LIFE

130 - 160 secs B4 flowcup @ 25°C 42 - 47% 0.92 - 0.94 63°C 24 months at 20°C

#### PROCESSING

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

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## **ULTIMEG 2000/380HF**

#### 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 dips in reverse, each cured 2 h at 160°C				
BOND STRENGTH ASTM D 115	RT	20.5kg	150°C	1.8kg	
DIELECTRIC STRENGTH RT 1660 V/0.01mm ASTM D 115					
(Copper plate)	24hr immersion in distilled water 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 19	32 on	glass cloth,	, curved	electrode	•
Intercept	25	,000 hours	167°C		
According to UL 144	46 Int	tercept 20.0	00h	on enam	elled wires
WIRE TYPE					
				1	TT 10 1 01
			Twiste	d Pair	Helical coil
Polyurethane &Nylo	n (MW-28,	class 130)	Twiste	<b>d Pair</b> 130	Helical coll 155
Polyurethane &Nylo Polyester & Nylon	n (MW-28, (MW-24,		Twiste		
• •	(MW-24,		Twiste	130	155
Polyester & Nylon	(MW-24,	class 155) class 180)	Twiste	130 155	155 180
Polyester & Nylon Polyester imide	(MW-24, (MW-30,	class 155) class 180)	Twiste	130 155 180	155 180 200

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

<u>HEALTH & SAFETY</u> Refer to Material Safety Data Sheet available.

PACKAGING 210 ltr, 25 ltr, 5 ltr

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# TECHNICAL BULLETIN TECHNICAL BULLETIN

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