varnish

Damisol® 2005 HFP

- ►Alkyd phenolic based varnish
- ►Class H - UL approved File E 98511 (TP = 200°C - HC = 180°C)
- ►High mechanical properties
- ►Quick curing process
- ►Good build up.

General description
Base : Alkyd Phenolic resin.
Yellowish transparent dipping varnish, thermosetting.
In its hardened state it is a tough material with good mechanical properties.
UL Recognition File n° E 98 511
Twisted Pair 200°C, Helicoil 180°C.

Application
Impregnation of all equipment, static or rotating up to class H 180°C. Due to its strong reactivity at low temperature, this varnish could be used for lower class (B, F and H) materials.

Processing
Dipping
The part to be impregnated can be pre-heated to a maximum temperature of 50°C to assist the penetration of the varnish into the winding. The time in the varnish will depend upon the complexity and accessibility of the part.

Dipping under vacuum and pressure
It is rarely necessary to preheat the part even with the most inaccessible winding. The level of vacuum must be sufficient to remove all the air from the part but not excessive as to cause evaporation of the solvent.

Trickle impregnation
Trickle impregnation is possible but the flow of the varnish and removal of solvent must be controlled to avoid the formation of bubbles during curing.

curing Time and Temperature
8 - 12 h at 130°c / 3 - 5 h at 150°c / 1 - 2 h at 180°c
Note : The curing time begins as soon as the items have reached the stated temperature. For items which are mechanically and chemically highly stressed, it is recommended to increase the curing time.

Effect on polyesterimide, polymide and polyamide-imide enamelled wires (DIN 46453):
- before the effect : 5 - 7 H (Pencil Hardness),
- after the effect : 5 - 7 H (Pencil Hardness).

Packaging
20 kg cans,
200 kg drums,
1000 kg containers.

Storage Conditions
12 months at a temperature between 5 and 25°C in original packing, away from sunlight and moisture.

Health and safety
. Avoid any contact with skin and eyes,
. Work in a well ventilated area, far from any flame,
. Wear safety gloves and goggles.
Refer to the Material Safety Data Sheet for complet information.

Von Roll France SA
F-69330 Meyzieu
www.vonroll.com

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		Value	Test norm
Mechanical properties			
Bond Strength (Helical Coil) MW-35 @ 25ºC	Index	12 - 14	DIN 46456
Bond Strength (Helical Coil) MW-35 @ 155ºC	Index	1.5 - 2	DIN 46456
Film aspect		Dry, thin flexible film	
Chemical properties			
Resistance to transformer oils		no change, good	
Resistance to Acetone vapour		Little swelling	
Resistance to Benzol vapour		Little swelling	
Resistance to Hexane vapour		Little swelling	
Resistance to Methanol vapour		No change	
Resistance to Carbon disulphide vapour		Large swelling	
Resistance to liquid chemicals : 2 % caustic soda solution	7days	No change	
Resistance to liquid chemicals : 5 % sulphuric acid	7days	No change	
Resistance to liquid chemicals : detergent solution	7days	No change	
Weight change after storage in water at 23°C - water absorption	%	<1	
Weight change after storage in water - weight loss at 23°C	%	<0.1	
Electrical properties			
Electric strength, perpendicular- after 24 h at 23°C + 50 % r.h.	kV/mm	>90	
Dielectric strength - after 96 h at 23°C- 92 % r.h.	kV/mm	>80	
Dielectric strength at 155°C	kV/mm	>80	
Specific resistivity at 23°C / 50 % r.h.	Ohms.cm	10 Exp 16	
Specific resistivity after 24 h 50 % r.h. at 155°C	Ohms.cm	10 Exp 10	
Specific resistivity after 240 h storage in water at 23°C	Ohms.cm	10 Exp 16	
Physical properties			
Smell		Very low	
Density at 20°C	g/cm³	0.945	DIN 51757
Solid content	%	44 ± 2	DIN 46456
Diluent		9114	
Colour		Pale yellow	
Flash point	°C	37	
Viscosity (Brookfield) at 23°C	mPa.s	390 ± 10	
Viscosity Cup 4 at 23°C - LG	s	195 ± 10	LG ISOLA
Viscosity at 50°C - LG	s	50 ± 10	LG ISOLA
Viscosity Cup 4 at 23°C	s	80 ± 10	DIN 52311
Viscosity Cup 4 at 50°C	s	22 ± 10	DIN 52311

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