






ULTIMEG RANGE

TECHNICAL GUIDE TO SELECTION



Electrical Insulating Varnishes and Resins



		Resin type	Thermal Class (temp°C)	Flash Point Abel closed cup °C	S.G G/cm³	Shelf life Months @ 21°C	V.O.C %age	Viscosity B4 cup seconds or Poise @ 25°C	Typical cure hrs @	Bond strength ASTM D2519 @ 21°C kg	Bond strength ASTM D2519 @ 21°C
SOLVENT BASED VARNISHES	Oven cure varnish	U250#	Epoxy phenolic	H(180)	26	1	18	58	45	4 hrs @ 150°C	22.7
		U370	Modified polyester	H(180)	43	0.99	18	50	120	3 hrs @ 130°C	16.8
		U200FR	Modified polyester	H(180)	43	1	12	45	75	4 hrs @ 130°C	N/A
		U380 	Phenolic mod Polyester	H(180)	40	0.93	24	50	130	4 hrs @ 130°C	20.5
	Air drying varnish	U376	Alkyd	B(130)	27	0.94	12	68	25	Air drying	N/A
		U372	Alkyd	F(155)	27	0.97	12	58	180	Air drying	N/A
		U372H	Silicone mod Alkyd	H(180)	27	1.04	12	50	120	Air drying	N/A
		U620	Acrylic	A or B	20	0.91	24	65	2.25	Air drying	N/A
		U705	Cellulose Acetate	N/A	<22	0.95	24	65	Thixo	Air drying	N/A
	SOLVENTLESS RESINS	Dipping / VPI / Roll Dip Resins	U505	Unsaturated Polyester	H(180)	31	1.63	9	100% Reactive	105	2hrs @ 130°C
U510			Polyester	H(180)	65	1.03	12	5	40	4 hrs @ 130°C	N/A
U520 			Unsaturated Polyester	H(180)	166	1.18	18	100% Reactive	6	4 hrs @ 130°C	22
U540 Pig			Unsaturated Polyester	H(180)	31	1.08	12	100% Reactive	60	2hrs @ 130°C	19
U550			Polyester Imide in Diacrylate	H(180)	>200	1.1	6	100% Reactive	20	3hrs @ 130°C	16
Trickle Resins		U530OPT	Unsaturated Polyester	H(180)	31	1.1	12	100% Reactive	2-2.5	Induction	25
		U530A&B	Unsaturated Polyester	H(180)	31	1.08	3	100% Reactive	2-2.5	Induction	25
		U530GC	Unsaturated Polyester	H(180)	31	1.2	3	100% Reactive	40	60 min. @ 130°C	19
		U2020	Epoxy	H(180)	N/A	1.12	24	0	3	Room temperature	25
WATER BASED		Aquameg	A300	Polyester	H(180)	N/A	1.04	18	3	50	4 hrs @ 130°C
	A850		Phenolic Copolymer	H(180)	N/A	1.03	18	3	50	4 hrs @ 150°C	22
	A1000		Epoxy Emulsion	H(180)	N/A	1.05	12	0	30-60 cps	4 hrs @ 150°C	26
EPOXY TECHNOLOGY		U2002L	Epoxy	H(180)	N/A	1.12	12	0	5	4 hrs @ 150°C	26
		U2002	Epoxy	H(180)	N/A	1.14	12	0	7	4 hrs @ 150°C	28
		U2002T	Epoxy	H(180)	N/A	1.15	12	0	35	4 hrs @ 150°C	37
		U2002XT	Epoxy	H(180)	N/A	1.16	12	0	65	4 hrs @ 150°C	45
		U2002HVR	Epoxy	F(155)	N/A	1.14	12	0	10	8hrs @ 165°C	31
		U2004LF	Epoxy	H(180)	N/A	1.12	12	0	4	12hrs @ 160°C	25
		U2001WW	Epoxy	H(180)	N/A	1.48	6	0	Thixo	4 hrs @ 150°C	N/A
		U2050	Epoxy	H(180)	N/A	1.22	9	0	100 - 150	Induction 15 mins @120°C	40
		U2006	Epoxy	H(180)	N/A	1.15	12	0	30	8 hrs @ 140°C	32

Bond strength ASTM D519 @ 50°C kg	Dielectric strength		Special property	Application	Description
	ASTM D115 DRY Kv / mm	After 24hrs water immersion			
5.8	150	140	Chemical resistance	Hermetic motors	Epoxy phenolic varnish with excellent Freon gas resistance.
1.2	159	124	Fast or low temp. cure	Transformers / Motors	Resilient, high quality quick curing General purpose varnish for various applications.
N/A	160	140	High Build protection	Transformers/Coils	High quality enveloping protection varnish used where exceptional moisture and chemical resistance is required. Remains flexible.
1.8	166	120	High bond, tank stable UL approved	Motors / general purpose	Excellent UL recognised high build general purpose varnish. Used by many OEMS and repair shops.
N/A	65	28	Cost effective	Transformers / LV motors / coils	Low viscosity, fast drying sealing and tropicalising varnish for small motors and transformers.
N/A	72	30	Fast drying, CTi 180	Motors / transformers	High build alkyd air drying varnish. Available in pigmented versions as anti-tracking enamels
N/A	79	34	High temperature class	Motors / transformers	Class H air drying varnish. Available in pigmented versions as anti-tracking enamels
N/A	160	152	Moisture resistance	PCB	Quick dry acrylic conformal coating conforming to BSEN61086 (formerly BS5917) and MIL-I-46058C. Type AR1.1
N/A	N/A	N/A	Removable	Masking compound	Very quick drying blue masking lacquer.
5	100	46	Heat Transfer	Lighting ballasts	White pigmented ballast resin where heat transfer is a necessity.
N/A	140	70	Flexible	Transformers, ferrite cores	Flexible, high build up polyester resin for application by VPI in transformers. Very good noise reduction properties.
7	130	81	Not classified as flammable	Motors / Transformers	Low odour, high flash point single component resin for VPI, roll and immersion applications.
5	155	112	Bespoke colour impregnation	Transformers	Pigmented impregnation coating for transformers, available in most RAL colours
4	100	60	Low V.O.C fast process	Transformers / Motors	Low V.O.C impregnation by Dip / Roll / VPI of Motors / Transformers where fast, Low temperature process is required.
10	145	108	One part fast cure	Stators / Rotors	Single component trickle resin for easy processing and quick cure of stators and rotors.
10	155	112	High bond	Stators / Rotors	General purpose high bond two part trickle resin
5	130	108	High build	Domestic appliances	Blue reinforced Gel Coat for high speed armatures
6	110	82	High bond, room temperature cure	Stators / Rotors	High bond strength , ambient cure epoxy trickle resin
3.5	135	112	Cost effective	Motors / Transformers	General purpose VOC compliant water based varnish
4.8	139	119	High bond, tank stable	Motors / General Purpose	VOC compliant water based varnish with high bond strength even when used at low solids levels.
5.5	105	100	Chemical resistance & Bond strength	LV Motors / Hermetic Motors	0 VOC Epoxy Emulsion with excellent bond strenghts at elevated temperatures and good resistance to chemicals including those used in Hermetic applications.
5.4	104	75	Low viscosity / V.O.C	Motors / Transformers	0 V.O.C Epoxy impregnation applied by dip / roll / VPI to all general purpose motors and transformers.
6	90	70	General purpose VPI	MV / Traction Motors	Single component, General purpose VPI resin giving all the benefits of Epoxy resin.
8.3	120	65	Higher film build	LV / MV / Traction / Trafo	Higher build Epoxy VPI resin, where traditional film builds of Epoxy are not acceptable.
8	115	60	Chemical resistance	MV Generators / Motors	Silica filled epoxy resin for VPI impregnation of random wound stators and rotors. High build.
6.8	120	85	High Voltage resin	HV Machine impregnation	Global impregnation of HV systems where uncatalysed Mica tapes are used up to 15KV
3	N/A	N/A	Flexible	Wound Cores	Flexible void free impregnation of cut cores and transformers
N/A	100	85	Heat transfer	Wet winding of field coils / end windings	Wet winding resin that cures to give exceptional bond and heat transfer
7	>200	100	Single component trickle	Power Tools / Automotive Armatures	Tough single component trickle resin capable of replacing USPE Impregnation/gel coat trickle process. Excellent thermal shock capability.
5.4	210	115	Film build / Bond strength stability	VPI of LV Machines	A single component VPI epoxy resin with excellent stability and high performance in bond strength and electrical properties.



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