



# Ultimeg Range

Technical Guide To Selection

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## Electrical Insulating Varnishes & Resins

OBOR2 UL Recognised Products  
OBJS2 UL Systems  
Various Chemistry & Applications



		Resin type	Thermal Class	Flash Point	S.G	Shelf life	V.O.C	Viscosity	Typical cure	Bond strength	Bond strength	Dielectric strength		Special property	Application	Description	
			Class according to UL1446 (temp°C)	Abel closed cup °C	G/cm <sup>3</sup>	Months @ 21°C	%age	B4 cup seconds or Poise @ 25°C	hrs @	ASTM D2519 @ 21°C kg	ASTM D2519 @ 150°C kg	ASTM D115 DRY Kv / mm	After 24hrs water immersion				
SOLVENT BASED VARNISHES	Oven cure varnish	U250#	Epoxy Phenolic	H (180c)	26	1.00	18	58	45	4 hrs @ 150°C	22.7	5.8	150	140	Chemical resistance	Hermetic motors	Epoxy phenolic varnish with excellent Freon and refrigerant gas resistance.
		U200FR	Modified Polyester	H (180c)	43	1.00	12	45	75	4 hrs @ 130°C	N/A	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.
		U370	Modified Polyester	H (180c)	43	1.00	18	50	120	3 hrs @ 130°C	18	1.2	159	124	Fast or low temp. cure	Transformers / Motors	Resilient, high quality quick curing. General purpose varnish for various applications.
		*U380 	Phenolic Modified Polyester	H (180c)	40	0.90	24	50	130	4 hrs @ 130°C	20.5	1.8	166	120	High bond, tank stable, UL approved	Motors / general purpose	UL recognised high build general purpose varnish. Used by many OEM'S and repair shops. UL systems are available.
	Air drying varnish	U376	Alkyd	F (155c)	27	0.90	12	68	25	Air drying	N/A	N/A	65	28	Cost effective	Transformers / LV motors / coils	Low viscosity, fast drying sealing and tropicalising varnish for small motors and transformers.
		*U372 	Alkyd	H (180c)	27	1.00	18	58	180	Air drying	N/A	N/A	72	30	Fast drying, CTi 180	Motors / transformers	High build alkyd air drying varnish. Available in pigmented versions as anti-tracking enamels. UL systems are available.
SOLVENTLESS RESINS	VPI & Dipping Resin	U510	Polyester	H (180c)	65	1.03	12	5	40	4 hrs @ 130°C	N/A	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.
		*U520 	Unsaturated Polyester	H (180c)	166	1.20	12	5	6	4 hrs @ 130°C	22	7	130	81	Not classified as flammable	Motors / Transformers	Low odour, high flash point single component resin for VPI, roll and immersion applications. UL systems are available.
		U540 Pig	Unsaturated Polyester	H (180c)	31	1.10	12	5	60	2hrs @ 130°C	19	5	155	112	Pigmented impregnation	Transformers	Pigmented impregnation coating for transformers, available in most RAL colours.
WATER BASED	Aquameg	*A300 	Polyester	H (180c)	N/A	1.00	18	3	50	4 hrs @ 130°C	22	3.5	135	112	Cost effective	Motors / Transformers	General purpose VOC compliant water based varnish.
		A850	Phenolic Modified Polyester	H (180c)	N/A	1.00	18	3	50	4 hrs @ 130°C	22	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.
ANCILLIARY PRODUCTS	U705	Cellulose Acetate	N/A	<22	1.00	24	65	Thixo	Air drying	N/A	N/A	N/A	N/A	Removable	Masking compound	Rapid drying, traditional blue masking lacquer.	
	U720	HT Masking Grease	N/A	N/A	0.90	36	0	Grease	No cure	N/A	N/A	N/A	N/A	High temperature	Masking Grease	Masking solution for all types of surfaces prior to Dip or VPI impregnation methods. Protects surfaces from Polyester and Epoxy resins without causing contamination to tanks. Easily wiped clean post impregnation cure.	
	Ulti Flex 3028	Polybutadiene (PBD)	F (155c)	> 180	1.10	12	0	(Base) 300-400	2-4 Hrs @ R-T	N/A	N/A	N/A	N/A	Highly flexible, brush or spray	Encapsulation of motors and generators, for sealing from harmful ingress	Two part flexible PBD compound, available in Black or Natural (Beige). Excellent impact and abrasion resistance at elevated temperature. Superior thermal conductivity and shock resistance, due to the flexible nature over a wide temperature range, (-65c to +155c).	
	U2833	Epoxy Amine	B (130c)	N/A	1.30	12	N/A	70-160	2hrs @ 130c	TBC	TBC	150	112	Long pot life	Spray application	A red two component epoxy resin with low filler content. Designed to feature a long pot life to ease processing and may be diluted with Ultimeg T4 thinners for easy spray application. This results in a semi-rigid yet flexible film which resists cracking under strain or bending.	
	XP3	Epoxy	H (180c)	> 145c	2.00	12	0	Putty	20-30 min to gel 25g @ R-T	N/A	N/A	N/A	N/A	Class H, Quick Cure	Balancing, gap filling, light ballasts in transformers and sealing	Two part class H (180c), 1:1 mix ratio, coloured magenta and blue, which when mixed properly gives a uniform Purple to ensure uniform mixing. Fast curing and excellent chemical and physical properties particularly dimensional stability. (Metal, glass, plastics, timber, dry concrete rubber etc). Primarily used as a balancing putty.	
	U2220GP	Epoxy	H (180c)	N/A	2.00	12	0	Putty	3hrs @ 150c	N/A	N/A	210	115	1 component putty	Filling putty rotating machines	Single component filling putty compatible with U2002 & U2220 series Epoxy resins. Fills gaps in windings on rotating or static machines. Available in UL systems.	
	UF820	Epoxy	B (130c)	N/A	1.68	> 12 Months	0	Thixotropic	4 hours @ 60c	N/A	N/A	N/A	N/A	Thixotropic trowelling compound	Encapsulation of stator end windings	Part A, Part B, brick red, two part 50 / 50 mix. Epoxy protection of stator end windings against moisture, oil, dust and carbon ingress.	
	U8000	Epoxy	H (180c)	N/A	1.20	12	0	300Ps	5 mins-12 hrs	Roller peel test, Pli (N / mm), ISO 4578; 27 (4.8)		N / A	N / A	High shear and peel strength	Multi purpose Epoxy Adhesive	Multi purpose Epoxy Adhesive. Rapid cure at ambient temperature with extremely high shear and peel strength. Suitable for use in class H systems and U-L recognised in OBJS2 systems, AEV 155-1 and AEV 180-1.	

\*UL rated products according to OBOR2 file number E220579. UL systems (OBJS2) also available for adoption.