ULTIMEG RANGE

Electrical Insulating Epoxy Resins



Guide To Selection

VOC Free Epoxy Technology
Non Flammable
UL Recognised Products

Qualities that Bond

Europe's largest independent manufacturer of insulating varnishes & resins







AEV specialise in the manufacture of electrically insulating resins, varnishes and compounds.

Our products are used in the manufacture of a wide range of electrical machines and electronics, from domestic appliances to industrial products for the defence, energy and transport industries.

The current product range is the result of years of research and development by a highly skilled and dedicated team. Each product has been chemically engineered to deliver advanced performance in its unique application, balanced with responsible sourcing and environmental considerations.

AEV is a family owned company with its main base of operations in the UK. Through growth and acquisition, the AEV brand has evolved into a global group of companies, supplying its range of innovative products from multiple manufacturing locations worldwide.

Epoxy Resins

	Thermal Class	S.G	Shelf life	V.O.C	Viscosity	Typical cure	Bond strength		Dielectric strength		Special property	Application
	Class according to UL1446 (temp°C)	G/cm3	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 IEC243-1	After 24hrs water immersion		
Epoxy, single part, VOC free trickle resins												
U2050L (UL provisional) A clear low viscosity, single component Trickle resin suitable for automated trickle application, low / non odour, high bond strength good penetration epoxy resin.	H (180)	1.20	9	0	60	5 -7 mins @ 150°c (Induction)	IEC 1033 Twisted Coil @ 23°c >700N	IEC 1033 Twisted Coil @ 155°c > 70N	>200 kV/cm	Dielectric Constant IEC250 3.9 @ 50hZ	Stable Single part, low viscosity, V.O.C free quick cure epoxy	Suitable for OEM application as an alternative to traditional Polyester two part systems
U2050 (UL provisional) A rapid cure, single part White Epoxy trickle resin with exceptional mecahnical and thermal capabilities. Available in RR version in a 0.5kg, hand held flexible bottle, with trickle spout.	H (180)	1.22	9	0	100-150	5-7 mins @ 150°c (Induction)	IEC 1033 Twisted Coil @ 23°c >700N	IEC 1033 Twisted Coil @ 155°c > 70N	>200 kV/cm	Dielectric Constant IEC250 3.9 @ 50hZ	White, rapid cure, stable single component, trickle epoxy	Power tool & Automotive armatures, quick repair on AC motors for the repair industry
U2050GC (UL provisional) A single part, white trickle resin, particularly designed for the reinforcement of rotating windings, under elevated centrifugal force, such as the single wires on commutators, and where coil leads start and finish.	H (180)	1.39	4	0	Thixo	20 mins @ 150°c	Tensile strength ISO527 35N/m2	Elongation ISO527 1.2%	>168 kV/cm	Dielectric Constant IEC250 4.56 @ 50hZ	White, single part, Gel coat/reinforing resin, giving 250-400µm build on windings	To offer reinforcement on susceptible rotating windings
U2020 High bond strength, ambient cure epoxy trickle resin. Available in Link Packs as an easy dispense option.	H (180)	1.10	24	0	3 (Mixed)	Room temperature	25	6	110	82	High bond, room temperature cure	Stators /rotors
U2830 A red single component epoxy resin with low filler content. The system is designed to fully cure with short processing time (2 hours at 130°c), which will result in a semi-rigid film with the flexibility to prevent cracking under strain or bending.	B (130)	1.29	12	0	105	2-5hrs @ 130-150°C	N/A	N/A	IEC 60243 150Kv/cm	N/A	Enviromental ingress protection, with short cure time and non crack flexible coating	Surface coating for component protection

Epoxy Resins

	Thermal Class	S.G	Shelf life	V.O.C	Viscosity	Typical cure	Bond strength		Dielectric strength		Special property	Application
	Class according to UL1446 (temp°C)	G/cm3	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 IEC243-1	After 24hrs water immersion		
Wet wound												
U2001WW Wet winding resin that cures to give exceptional bond strength and heat transfer.	H (180)	1.48	6	0	Thixo	4hrs @ 150°C	N/A	N/A	100	85	Heat transfer	Wet winding of field coils/end windings
Wound cores												
U2004LN Flexible void free impregnation of cut cores and transformers.	H (180)	1.12	12	0	3.5-5.5	4 hrs @ 165°C	Tensile strength ISO527 18N/m2	Elongation ISO527 10%	17.5	13	Low viscosity/V.O.C free	Wound Cores
Water based												
U2002AQ c UL us 0 VOC UL Recognised Epoxy Emulsion for impregnation of low voltage motors.	H (180)	1.09	12	0	20-30cps	4hrs @ 150°C	20	3	100	70	General Purpose Impregnation	LV motors

Epoxy Resins

	Thermal Class Class according to UL1446 (temp°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 @ 150°C kg	Dielectric strength ASTM D115 DRY Kv / mm IEC243-1	Dielectric strength After 24hrs water immersion	Special property	Application
VPI, Dip, Specialised and standard applications												
U2002L c UL us 0 V.O.C Epoxy impregnation applied by dip / roll / VPI to all general purpose motors and transformers. UL systems are available for all the 2002 range.	H (180)	1.12	12	0	4	4hrs @ 150°C	26	5.4	104	75	Low viscosity / V.O.C	Motors / Transformers
U2002T c UL us Higher build Epoxy VPI resin, where traditional film builds of Epoxy are not acceptable.	H (180)	1.15	12	0	35	4hrs @ 150°C	37	8.3	120	65	Higher film build	LV / MV / Traction / Trafo
U2002XT c UL us Higher build Epoxy VPI resin, for random wound machines rated up to 7Kv, offering film builds of 100µM. Designed for elevated chemical and mechanical protection, notably in chemical plants, offshore, marine locations and challenging enviroments.	H (180)	1.15	12	0	60	4hrs @ 150°C	45	8	IEC243. 50µM film. 50Hz & 20°c=115Kv/mm	IEC243. 50µM film. 50Hz & 150°c=55Kv/mm	Higher film build	LV / MV / Traction / Trafo
U2002HV c UL us Anhydride-free HV resin exhibiting very low viscosity at ambient and elevated temperatures for excellent impregnation of mica tapes for us up to 15kV.	H (180)	1.13	12	0	120 / 3.5	8hrs @ 165°C	37	8.5	TBC	TBC	High Voltage Resin	HV Machine Impregnation
U2002HVR c UL us Global impregnation of HV systems where uncatalysed Mica tapes are used up to 15kV.	H (180)	1.14	12	0	6	8hrs @ 165°C	31	6.8	120	85	High Voltage Resin	HV Machine Impregnation
U2006 c UL us A resilient single component VPI epoxy resin with excellent stability and high bond strength and electrical properties.	H (180)	1.15	12	0	30	8hrs @ 140c	32	5.4	210	115	Film build / Bond strength stability	VPI of LV Machines
U2006RD c UL us A solventless, fast gel, single component, slightly thixotropic resin, giving 100% filled windings, with exceptional high bond strength at operating temperatures up to class H (180°c).	H (180)	1.14	12	0	35	8hrs @ 140c. (Available with accelerated GT)	26	5.4	50µM film. 50Hz & 20°c=115v/µM	50µM film. 50Hz & 150°c=58v/µM	Ideal for Chemical, Offshore and Marine environment.	Roll DIp/Trickle/ VI of Rotating machines especially alternatriors
U2220 c UL us A high performance VPI Epoxy resin system that exhibits superior properties at elevated temperatures.	C (220)	1.15	12	0	50	8hrs @ 165c	38	8.6	190	115	High Temperature properties	VPI of Traction motors and field coils

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