ULTIFIL RANGE

Polyurethane and Epoxy Encapsulating Resins



Guide To Selection

Potting & Casting Resins
Thermal Class B,F & H
Variety Of Applications

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.

Polyurethane Potting Resins

	PROCESSING INFORMATION							CURED PROPERTIES									
UL QMFZ2 File E174454	**S.G Base**	**S.G Mix**	**Mix ratio**	**Mix ratio**	**Viscosity mixture**	**Usable life**	**Colour**	**Hardness**	**Tensile strength**	**Elongation at break**	**Dielectric strength**	**Dielectric constant**	**Flame retardant**	**Water absorption**	**Thermal conductivity**	**Special property**	**Typical application**
	G/cm³	G/cm³	Parts by volume	Parts by weight	Poise @ 25°C	500 gms mass mins @ 21°C		Shore D / A	ASTM D-638 N	ASTM D-638 %	IEC 60243 Kv / cm	IEC 60250 @ 50Hz	UL 94 (UL recognised)	ISO 62 % @ 23°C	W/mK		
010	1.3	1.26	3.8:1	4:1	18	75	Black	85A	11	55	176	4.5	-	0.21	0.22	Resilient, medium to low viscosity general purpose potting	PCB, transformers, electronics
010X-#	1.45	1.4	3.95:1	4.6:1	35	5	Off-white Blue, Black	90A	13	44	160	4.5	-	0.21	0.28	Cost effective volume fill	Transformers, yellow box
025	1.5	1.45	4:1	4.88:1	18	60	Black	90A / 50D	15	95	200	5.3	VO	0.18	0.45	Flame retardant resilient low viscosity material, where high thermal conductivity and high elasticity is needed	PCB, transformers, electronics
041 UL94 V0 c UL us UL746B c UL us	1.56	1.5	3.5:1	4.4:1	22	10	Black	85D	32	8	189	4.5	VO	0.16	0.45	Flame retardant, rigid, general purpose potting UL RTI 1150C	Toroidal transformers, Capacitors
050N UL94 V0 c UL us	1.53	1.46	3.95:1	4.77:1	25	Various	All colours	75D	27	22	206	4.6	VO	0.18	0.32	Flame retardant, semi-rigid general purpose potting	Linear motors, transformers, Toroids, small magnets
050AD	1.56	1.49	5.32:1	6.78:1	8	20	Grey	75	9	64	195	4.5	-	0.2	0.43	Minimal pressure on inserts, lower shrinkage, and excellent adhesion for sealing to metal cases	Encapsulation, sealing and potting of electronic components
060	1.5	1.45	8:1	10:1	20	15	Off-white	75A / 12D	8	62	160	4.4	-	0.21	0.31	Flexible for stress sensitive components and re-enter ability	Ferrite cores, PCB, electronics, small transformers
060FR	1.71	1.62	6:1	8.5:1	55	5	Black	90A / 42D	13	48	160	4.9	VO	0.21	0.42	Flame retardant resilient, good heat dissipation	Large transformers, LV lighting
060XT	2.0	1.87	5:1	8.13:1	80	10	Black	55D	13	35	155	5.4	-	0.24	1.02	High thermal conductivity	Transformers that require heat dissipation
PU570	1.05	1.13	1:1	1:1.5	14	10	Clear (water white)	50	N/A	70	15	N/A	-	<1.5%	N/A	Clear, room temperature cure, flexible, UV Stable	LED encapsulation, sealing and potting of electronics
UFPU-461/38	1.52	1.5	N/A	100:16	15	20 min	All colours	85A/ 43D	7	25	>18	N/A	-	0.15	0.70	Flexible, Fire Retardant	Transformers/General Purpose

Epoxy Potting Resins

	PROCESSING INFORMATION							CURED PROPERTIES									
UL QMFZ2 File E174454	**S.G Base**	**S.G Mix**	**Mix ratio**	**Mix ratio**	**Viscosity mixture**	**Usable life**	**Colour**	**Hardness**	**Tensile strength**	**Elongation at break**	**Dielectric strength**	**Dielectric constant**	**Flame retardant**	**Water absorption**	**Thermal conductivity**	**Special property**	**Typical application**
	G/cm³	G/cm³	Parts by volume	Parts by weight	Poise @ 25ºC	500 gms mass mins @ 21ºC		Shore D / A	ASTM D-638 N	ASTM D-638 %	IEC 60243 Kv / cm	IEC 60250 @ 50Hz	UL 94 (UL recognised)	ISO 62 % @ 23ºC	W/mK		
U2004	1.1	1.1	3:1	3.3:1	2	45	Clear	82D	47	5	182	4.3	-	0.12	0.22	Low viscosity, thermal shock resistance, class F	Transfomers, electronics, small brake coils
U2004B	1.1	1.1	3.6:	4:1	2	45	Black	80D	45	6	168	4.5	HB	0.14	0.22	Low viscosity, thermal shock resistance, class F	Transfomers, electronics, small brake coils
UF810	1.8	1.7	8.75:1	15:1	120	90	Blue	87D		4	160	4.9	-	0.18	0.46	General purpose potting	Coils, general in-fill
UF810NL UL94 V0	1.78	1.6	3.5:1	6.25:1	40	40	All colours	87D	50	2	180	4.7	VO	0.16	0.44	Flame retardant potting of electronic transformers	Small to medium transformers
UF810STB UL94 V0	1.87	1.79	10:1	19.8:1	45	45	Black	88D	55	1	200	5.4	VO	0.18	1	High thermal conductivity, flame retardent, Class H	Ballasts, heat sinks
UF814	1.18	1.11	1.73:1	3:2	20	45	Black	70D	35	3	250+	3.4	-	0.15	TBC	Flexible, semi-rigid with good adhesion to XLPE, PVC nylon and all metals.	Cable jointing compound
UF815	1.05	1.05	2:1	2:1	10	25	Clear	60A	1	45	270	6.2	-	0.18	0.23	Low viscosity, flexible Epoxy resin system. Can be re-enterable for repair	Connectors, sensors
UF2004TCB UL94 HB	1.77	1.65	5:1	9:1	45	45	Black / Grey	89D	52	4	190	4.8	HB	0.16	0.7	Good themal conductivity, thermal shock resistance, Class H	Linear motors, transformers, Toroids, small magnets
UF2114TC# UL94 HB	1.82	1.68	5.5:1	10:1	25	180	All colours	85D	65	1	190	5.2	HB	0.15	1	High thermal conductivity. Resilient & class H with good surface finish. Available in all RAL colours.	Linear motors, transformers, Toroids, small magnets
UF2040R	1.73	1.65	5:1	9:1	45	120	White	50D	52	11	190	5.5	HB	0.11	0.6	Flexible for large castings and thermal shock resistance	Large Magnets, Hybrid motors
UFEP-55/8M	1.72	0.97	N/A	100:14	14	50 min	Green	75D	N/A	N/A	N/A	N/A	V0	0.15	0.72	Fire Retardant	Transformers/General Purpose
UFEP-17	1.83	1	N/A	100:20	20	N/A	All colours	90D	N/A	N/A	N/A	N/A	-	0.15	0.60	Excellent mechanical and dielectric properties	Magnetic coils/ Transformers

Polyurea Potting Resins

	PROCESSING INFORMATION							CURED PROPERTIES									
UL QMFZ2 File E174454	**S.G Base**	**S.G Mix**	**Mix ratio**	**Mix ratio**	**Viscosity mixture**	**Usable life**	**Colour**	**Hardness**	**Tensile strength**	**Elongation at break**	**Dielectric strength**	**Dielectric constant**	**Flame retardant**	**Water absorption**	**Thermal conductivity**	**Special property**	**Typical application**
	G/cm³	G/cm³	Parts by volume	Parts by weight	Poise @ 25ºC	500 gms mass mins @ 21ºC		Shore D / A	ASTM D-638 N	ASTM D-638 %	IEC 60243 Kv / cm	IEC 60250 @ 50Hz	UL 94 (UL recognised)	ISO 62 % @ 23ºC	W/mK		
UFUR-1	1.10	2.30	N/A	100:50	12	20 min	Red, Black	83A/ 30D	9	200	N/A	N/A	-	N/A	N/A	Excellent dielectric properties from -40°C upto + 120 °C.	Electromagnets, transformers, capacitors and for elastic castings
UFUR-S31	1.50	1.80	100:73	100:85	10	5 min	Black plus other on request	80D	N/A	2	>18	N/A	V0	0,15	0,70	Very fast curing	General purpose

Notes

Notes

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