

# Ultifil Range

Technical Guide To Selection

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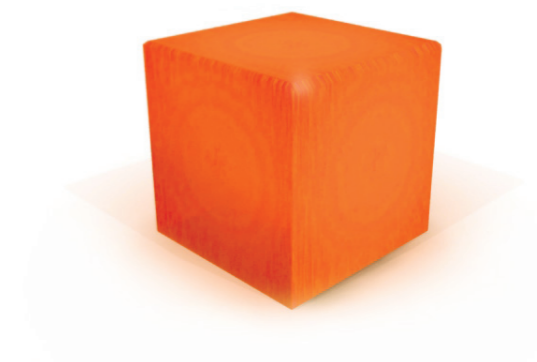
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## Polyurethane and Epoxy Encapsulating Resins

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



		PROCESSING INFORMATION								CURED PROPERTIES								SPECIAL PROPERTY	TYPICAL APPLICATION
		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		
			G/cm <sup>3</sup>	G/cm <sup>3</sup>	Parts by volume	Parts by weight	Poise @ 25°C	500 gms mass mins @ 21°C		Shore D / A	ISO 527 mpas	ISO 527 %	IEC243-1 Kv / cm	IEC 250 @ 50Hz	UL 94	ISO 62 % @ 23°C			
POLYURETHANE POTTING RESINS	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
	020		1.5	1.45	4:1	4.88:1	18	60	Black	75A	12	80	190	5.3	VO	0.18	0.32	Flame retardant resilient, medium to low viscosity general purpose potting	PCB, transformers, electronics
	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
	030		1.42	1.35	1.7:1	2:1	16	5	Black	85D	45	2	192	4.1	-	0.13	0.25	Rigid medium to low viscosity general purpose potting	Toroidal transformers
	041	UL94 V0 UL746B	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 115°C	Toroidal transformers, Capacitors
	045		1.5	1.5	3.1:1	3.7:1	22	5	Black	85D	37	8	195	4.3	VO	0.16	0.4	Flame retardant rigid resin system Class F according to IEC216, 20,000hrs	Toroidal transformers and high temperature casting
	050s		1.28	1.28	3.5:1	3.7:1	18	20	Black	60D	20	40	184	4.4	-	0.17	0.22	Semi-rigid, medium to low viscosity general purpose potting	Linear motors, transformers, small magnets
	050N	UL94 V0	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
	050X-3		1.2	1.2	2.22:1	2.4:1	8	10	Black	80D	32	8	184	4.3	-	0.15	0.21	Low viscosity, low profile, rigid compound	Small transformers
	050AD		1.56	1.49	5.32:1	6.78:1	8	20	Grey	75A	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
075		1.02	1.04	1.5:1	1.5:1	4	90	Clear	75D	29	80?	215	5.1	-	0.16	0.23	Low viscosity, optically clear, UV stable potting	LED's, PCB, electronics	
EPOXY POTTING RESINS	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	Transformers, 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	Transformers, electronics, small brake coils
	UF820		1.45	1.65	3:4	1:1	Thixo	120	Red	87D	52	6	157	5.6	-	0.2	0.6	Thixotropic trowelling compound	Encapsulation of stator end windings
	UF810		1.8	1.7	8.75:1	15:1	120	90	Blue	87D	55	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 retardant, Class H	Ballasts, heat sinks
	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 thermal 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
	UF2114FR		1.82	1.68	5.5:1	10:1	30	180	Black	85D	68	1	190	5.2	VO	0.15	0.75	Good thermal conductivity, resilience and class H with the added benefit of V-0 Flame retardency	Transformers
	UF2040D		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

All UL recognised products are available for adoption from UL 1446 systems for Class F and Class H under AEV file number E321249