



Encapsulant for Protecting PCB's and Electronics

MG Chemicals offers a wide range of epoxy potting compounds for protecting printed circuit boards and electronic devices. It provide superior protection against water damage and chemical, mechanical, thermal or electrical shock.

Features & Benefits

- Convenient mix ratios
- UL94 V-0 and UL 746A grades available
- Thermally conductive options available
- Low exotherm
- Excellent dielectric properties
- Wide service temperature range
- Primeless adhesion to most substrates
- Superior physical and mechanical properties
- RoHS compliant

Applications

- PCBs protection in commercial transportation
- Circuit protection for oil and gas sensors
- Encapsulation of transmitter components in deep sea telecom cables
- Ruggedization for LED drivers
- IP protection

One-Part

9510 – Black, rigid, unlimited working time

Two-Part

832B – Black, 2:1 mix ratio, 1 hour working time

832HD – Black, 1:1 mix ratio, 45 minutes working time

832C – Translucent, 2:1 mix ratio, 1 hour working time

832WC – Optically clear, 2:1 mix ratio, 2.5 hours working time

832FX – Flexible, 1:1 mix ratio, 1 hour working time

832HT – High service temperature, 1.6:1 mix ratio, 1 hour working time

832TC – Thermally conductive. 1:1 mix ratio, 2 hour working time

Two-Part Flame Retardant

834B – Meets UL 94V-0 standard, thermal conductivity of 0.8 W/(m·K), 2:1 mix ratio, 1 hour working time

834HTC – UL 746A certified, thermal conductivity of 0.94 W/(m·K), 5:1 mix ratio, 1.5 hour working time

834FX – Fleixble, meets UL 94V-0 standard, thermal conductivity of 0.6 W/(m·K), 1:1 mix ratio, 2.5 hour working time

Epoxy Potting Compounds



	ONE-PART			TWO-PART				
	9510	832B	832HD	832C	832WC	832FX	832HT	832TC
UNCURED PROPERTIES								
Color	Black	Black	Black	Translucent	Optically clear	Black	Black	Black
Mixed density [g/mL]	1.12	1.08	1.04	1.07	1.06	1.06	1.10	1.67
Viscosity [Pa·s]								
Mixture	4.8	3.3	4.1	2.7	0.98	0.70	22	27
Part A	—	2.5	5.9	1.9	2.9	0.80	46	33
Part B	—	5.3	2.3	6.6	0.3	0.17	6.6	12
Mix ratio by volume [A:B]	—	2:1	1:1	2:1	2:1	1:1	1.6:1	1:1
Working time [min]	Unlimited	60	45	60	60	150	60	120
Cure time [min @ °C]	180 @ 80	60 @ 65	120 @ 65	60 @ 65	120 @ 65	120 @ 65	60 @ 65	120 @ 65
	60 @ 90	30 @ 80	60 @ 80	30 @ 80	60 @ 80	60 @ 80	30 @ 80	60 @ 80
	300 @ 120	20 @ 100	20 @ 100	15 @ 100	30 @ 100	30 @ 100	15 @ 100	45 @ 100
CURED PROPERTIES								
Tensile strength [N/mm ²]	20	57	32	45	10	9.6	48	23
Compressive strength [N/mm ²]	90	155	75	164	160	—	132	87
Lap shear [N/mm ²]								
Stainless steel	9.2	17	21	17	3.3	2.5	15	13
Aluminum	5.8	16	14	18	6.8	3.4	7.4	16
Hardness	84D	80D	80D	84D	82D	88A	87D	81D
TC @ 25 °C [W/(m·K)]	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.7
T _g [°C]	70	49	41	53	33	8.8	89	50
CTE prior T _g [ppm/°C]	74	79	73	150	80	114	86	142
CTE after T _g [ppm/°C]	217	196	207	161	192	218	152	114
Resistivity [Ω·cm]	2.6 x 10 ¹³	5.3 x 10 ¹²	1.4 x 10 ¹³	6.7 x 10 ¹²	1.6 x 10 ¹⁷	5.8 x 10 ¹²	1.0 x 10 ¹³	8.2 x 10 ¹²
Breakdown voltage [V]	36 700	51 900	41 700	60 400	41 000	36 300	>50 000	48 300
Dielectric strength [V/mil]	540	472	400	480	465	370	470	386
Service temperature [°C]	-65 — 150	-40 — 140	-40 — 150	-40 — 140	-40 — 140	-40 — 140	-40 — 225	-30 — 175
AVAILABLE PACKAGING								
Net contents	30 mL	375 mL	25 mL	375 mL	375 mL	450 mL	375 mL	450 mL
	300 mL	450 mL	50 mL	450 mL	3 L	1.7 L	3 L	2 L
	3.6 L	3 L	400 mL	3 L	12 L	7.4 L		8 L
		60 L	7.4 L	60 L	60 L	40 L		40 L
			40 L					



Epoxy Potting Compounds



TWO-PART FLAME RETARDANT

UNCURED PROPERTIES

	834B	834HTC	834FX
Certification	Meets UL 94V-0	UL 746A certified	Meets UL 94V-0
Color	Black	Black	Black
Mixed density [g/mL]	1.6	1.7	1.6
Viscosity [Pa·s]			
Mixture	16	10	15
Part A	28	56	8.0
Part B	2.1	2.4	16
Mix ratio by volume [A:B]	2:1	5:1	1:1
Working time [min]	60	90	150
Cure time [min @ °C]	150 @ 65 60 @ 80 20 @ 100	120 @ 65 60 @ 80 30 @ 100	120 @ 65 60 @ 80 30 @ 100

CURED PROPERTIES

	834B	834HTC	834FX
Tensile strength [N/mm ²]	17	22	5.3
Compressive strength [N/mm ²]	74	123	21
Lap shear [N/mm ²]			
Stainless steel	8.2	6.7	3.7
Aluminum	11	4.7	2.7
Hardness	85D	91D	88A
TC @ 25 °C [W/(m·K)]	0.8	0.9	0.6
T _g [°C]	56	117	0.7
CTE prior T _g [ppm/°C]	74	34	71
CTE after T _g [ppm/°C]	107	116	137
Resistivity [Ω·cm]	2.1 x 10 ¹²	3.0 x 10 ¹³	7.5 x 10 ¹¹
Breakdown voltage [V]	40 700	37 500	36 300
Dielectric strength [V/mil]	430	395	365
Service temperature [°C]	-40 — 175	-50 — 150	-50 — 125

AVAILABLE PACKAGING

	834B	834HTC	834FX
Net contents	375 mL 2.7 L 10.8 L 60 L	900 mL 60 L	450 mL 1.7 L 7.2 L 40 L

