



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
832FXT • Flexible, high viscosity, 1:1 mix ratio, 1 hour working time
832FXC • Flexible, clear, 1:1 mix ratio, 1 hour working time
832HT • High service temperature, 1:1 mix ratio, 45 minutes 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 • Flexible, meets UL 94V-0 standard, thermal conductivity of 0.6 W/(m·K), 1:1 mix ratio, 2.5 hour working time
834BLV • Meets UL 94V-0 standard, thermal conductivity of 0.5 W/(m·K), 2:1 mix ratio, 2 hour working time

Epoxy Potting Compounds



	ONE-PART					TWO-PART				
	9510	832B	832HD	832C	832WC	832FX	832FXT	832FXC	832HT	832TC
UNCURED PROPERTIES										
Color	Black	Black	Black	Translucent	Optically clear	Black	Black	Clear, yellow	Black	Black
Mixed density [g/mL]	1.1	1.1	1.0	1.1	1.1	1.1	1.0	1.1	1.1	1.7
Viscosity [cP]										
Mixture	4 800	3 300	4 100	2 700	980	700	1 920	410	22 000	27 000
Part A	—	2 500	5 900	1 900	2 900	800	1 680	485	46 000	33 000
Part B	—	5 300	2 300	6 600	340	170	530	192	6 600	12 000
Mix ratio by volume [A:B]	—	2:1	1:1	2:1	2:1	1:1	1:1	1:1	1.6:1	1:1
Working time [min]	Unlimited	60	45	60	60	150	170	170	60	120
Cure time [min @ °C]	180 @ 80	60 @ 65	120 @ 65	60 @ 65	120 @ 65	120 @ 65	60 @ 65	120 @ 65	60 @ 65	120 @ 65
	60 @ 90	30 @ 80	60 @ 80	30 @ 80	60 @ 80	60 @ 80	30 @ 80	60 @ 80	30 @ 80	60 @ 80
	30 @ 120	20 @ 100	20 @ 100	15 @ 100	30 @ 100	30 @ 100	10 @ 100	30 @ 100	15 @ 100	45 @ 100
CURED PROPERTIES										
Tensile strength [N/mm ²]	20	57	32	45	10	9.6	2.3	2.0	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	3.6	3.4	15	13
Aluminum	5.8	16	14	18	6.8	3.4	3.9	2.6	7.4	16
Hardness	84D	80D	80D	84D	82D	88A	80A	60A	87D	81D
TC @ 25 °C [W/(m·K)]	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.3	0.7
T _g [°C]	70	49	41	53	33	8.8	20	12	89	50
CTE prior T _g [ppm/°C]	74	79	73	150	80	114	124	212	86	142
CTE after T _g [ppm/°C]	217	196	207	161	192	218	295	260	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	1.5 x 10 ¹³	1.0 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	43 400	58 900	>50 000	48 300
Dielectric strength [V/mil]	540	472	400	480	465	370	350	472	470	386
Service temperature [°C]	-65 to 150	-40 to 140	-40 to 150	-40 to 140	-40 to 140	-40 to 140	-80 to 110	-80 to 110	-40 to 225	-30 to 175
AVAILABLE PACKAGING										
Net contents	30 mL	375 mL	25 mL	450 mL	375 mL	450 mL	25 mL	450 mL	375 mL	450 mL
	300 mL	450 mL	50 mL	3 L	3 L	1.7 L	50 mL	1.7 L	3 L	2 L
	3.6 L	3 L	400 mL	60 L	60 L	40 L	400 mL	7.4 L		40 L
	18.9 L	60 L	7.4 L				7.4 L	40 L		
			40 L				40 L			
			360 L							



Epoxy Potting Compounds



TWO-PART FLAME RETARDANT

UNCURED PROPERTIES

	834B	834HTC	834FX	834BLV
Certification	Meets UL 94V-0	UL 746A certified	Meets UL 94V-0	Meets UL 94V-0
Color	Black	Black	Black	Black
Mixed density [g/mL]	1.6	1.7	1.6	1.4
Viscosity [cP]				
Mixture	16 000	10 000	15 000	3 000
Part A	28 000	56 000	8 000	3 900
Part B	2 100	24	16 000	2 500
Mix ratio by volume [A:B]	2:1	5:1	1:1	2:1
Working time [min]	60	90	150	120
Cure time [min @ °C]	150 @ 65	120 @ 65	120 @ 65	120 @ 65
	60 @ 80	60 @ 80	60 @ 80	60 @ 80
	20 @ 100	30 @ 100	30 @ 100	20 @ 100

CURED PROPERTIES

Tensile strength [N/mm ²]	17	22	5.3	20
Compressive strength [N/mm ²]	74	123	21	90
Lap shear [N/mm ²]				
Stainless steel	8.2	6.7	3.7	15
Aluminum	11	4.7	2.7	19
Hardness	85D	91D	88A	87D
TC @ 25 °C [W/(m·K)]	0.8	0.9	0.6	0.5
T _g [°C]	56	117	0.7	74
CTE prior T _g [ppm/°C]	74	34	71	78
CTE after T _g [ppm/°C]	107	116	137	111
Resistivity [Ω·cm]	2.1 x 10 ¹²	3.0 x 10 ¹³	7.5 x 10 ¹¹	1.6 x 10 ¹³
Breakdown voltage [V]	40 700	37 500	36 300	40 300
Dielectric strength [V/mil]	430	395	365	395
Service temperature [°C]	-40 to 175	-50 to 150	-50 to 125	-80 to 200

AVAILABLE PACKAGING

Net contents	2.7 L	900 mL	1.7 L	450 mL
	60 L	60 L	40 L	3 L

