



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, 1:1 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	832HT	832TC
UNCURED PROPERTIES								
Color	Black	Black	Black	Translucent	Optically clear	Black	Black	Black
Mixed density [g/mL]	1.1	1.1	1.0	1.1	1.1	1.1	1.1	1.7
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 to 150	-40 to 140	-40 to 150	-40 to 140	-40 to 140	-40 to 140	-40 to 225	-30 to 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	8 L
		60 L	7.4 L	60 L	60 L	40 L		40 L
			40 L					



Epoxy Potting Compounds



TWO-PART FLAME RETARDANT

	834B	834HTC	834FX	834BLV
UNCURED PROPERTIES				
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 [Pa·s]				
Mixture	16	10	15	3.0
Part A	28	56	8.0	3.9
Part B	2.1	0.024	16	2.5
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	450 mL	450 mL
	10.8 L	60 L	1.7 L	3 L
	60 L		7.2 L	
			40 L	

