



## Applications

- Bonding heatsinks to CPUs
- Heat dissipation in battery pack housing
- Bonding thermocouples and sensors
- Potting LED drivers
- Encapsulating thermocouples
- Create firewall from powertrain

## Industries

- Battery modules and battery packs
- Consumer electronics
- Transportation
- Automotive
- Aerospace
- Defense
- Instrumentation
- Medical equipment
- Research

## Flame Retardant Adhesives

MG Chemicals has 2-part flame retardant epoxy adhesives that help contain the spread of fire in the event of sudden ignition. These products are quick setting, adhere to a wide variety of substrates and contain non-halogenated fillers.

**Structural** 9200FR

**Thermal** 8329TFF, 8349TFM

## Flame Retardant Potting Compounds

These products contain non-halogenated fillers and self-extinguish when exposed to open flames. They have a flowable consistency and can withstand harsh environments. The flexible compounds are great for aggressive thermal cycling and rigid plastics are for added protection from shocks and impacts.

**Rigid** 834B, 834HTC

**Flexible** 834FX

## Flammability Testing and Certification

**UL94 V-0 Certified** 9200FR, 8329TFF, 834HTC

**\*Meets UL94 V-0** 8349TFM, 834B, 834FX

Certified products were tested by UL laboratories as compliant and listed under file no. E334302. \*Products listed as meets comply to UL94 V-0 classification when tested by MG Chemicals but are not recognized by UL.

# Flame Retardant Materials



	ADHESIVES			POTTING COMPOUNDS		
	9200FR	8329TFF	8349TFM	834B	834HTC	834FX
<b>UNCURED PROPERTIES</b>						
Number of components	2	2	2	2	2	2
Color	Light yellow	Beige	Black	Black	Black	Black
Mixed density [g/mL]	1.3	1.6	1.6	1.6	1.7	1.6
Viscosity [Pa·s]						
Mixture	—	—	—	16	10	15
Part A	380	77	—	28	56	8.0
Part B	370	115	—	2.1	2.4	16
Mix ratio by volume [A:B]	1:1	1:1	—	2:1	5:1	1:1
Working time [min]	30 min	5 min	20 min	60	90	150
Cure time [min @ °C]	48 h @ 22	240 @ 22	260 @ 22	72 h @ 22	24 h @ 22	48 h @ 22
	960 @ 40	—	—	—	—	—
	180 @ 65	15 @ 65	20 @ 65	150 @ 65	120 @ 65	120 @ 65
	90 @ 80	10 @ 80	10 @ 80	60 @ 80	60 @ 80	60 @ 80
	30 @ 100	—	—	20 @ 100	30 @ 100	30 @ 100

## CURED PROPERTIES

Tensile strength [N/mm <sup>2</sup> ]	13	13	25	17	22	5.3
Compressive strength [N/mm <sup>2</sup> ]	46	65	115	74	123	21
Lap shear [N/mm <sup>2</sup> ]						
Stainless steel	14	7.1	6.7	8.2	6.7	3.7
Aluminum	10	8.3	4.4	11	4.7	2.7
Hardness	78D	82D	92D	85D	91D	88A
TC @ 25 °C [W/(m·K)]	0.4	0.8	0.9	0.8	0.9	0.6
T <sub>g</sub> [°C]	59	25	80	56	117	0.7
CTE prior T <sub>g</sub> [ppm/°C]	79	34	20	74	34	71
CTE after T <sub>g</sub> [ppm/°C]	126	146	120	107	116	137
Resistivity [Ω·cm]	—	7.9 x 10 <sup>12</sup>	6.5 x 10 <sup>12</sup>	2.1 x 10 <sup>12</sup>	3.0 x 10 <sup>13</sup>	7.5 x 10 <sup>11</sup>
Breakdown voltage [V]	39 800	43 700	43 700	40 700	37 500	36 300
Dielectric strength [V/mil]	497	375	368	430	395	365
Service temperature [°C]	-40 — 150	-40 — 150	-65 — 120	-40 — 175	-50 — 150	-50 — 125

## AVAILABLE PACKAGING

Net contents	25 mL (dual syringe) 45 mL (dual cartridge)	25 mL (dual syringe) 45 mL (dual cartridge)	25 mL (dual syringe) 45 mL (dual cartridge)	375 mL (2 bottle kit) 2.7 L (3 can kit) 10.8 L (3 can kit)	900 mL (2 can kit) 4.25 L (2 can kit)	450 mL (2 bottle kit) 1.7 L (2 can kit) 7.2 L (2 can kit)
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