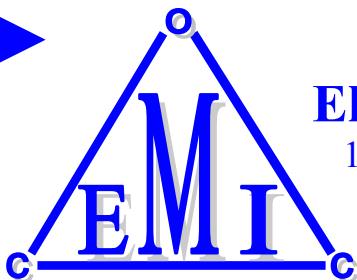


EMCAST UV Cure Adhesives

Selector Guide

- ▶ Encapsulants
- ▶ Sealants & Coatings
- ▶ Electrically Conductive
- ▶ Die Attach
- ▶ Adhesives



Electronic Materials, Inc.

1814 Airport Road, Breckenridge, CO 80424

Phone: (970) 547-0807 Fax: (970) 547-0817

www.electronicmaterialsinc.com

Featuring very low levels of ionic contamination and exceeding the requirements of NASA Reference Publication 1124 on outgassing, the following materials are ideally suited to a variety of electronic applications. Additionally, EMI offers acrylate based UV cure materials, single and two component thermal cure epoxy adhesives. Customized formulations and packaging is also available.

EMCAST UV Cure Adhesives – Single Component												
Product	Type	Color	Viscosity	Hardness	Tg°C	Diel. St. Volts/mil	Vol. Rest. OHM/CM	Dielect Constant	Sp. Gravity	CTE ppm/°C	Sheer Strength	Shelf life @ 20°C
1710	Epoxy	Clear	600	67D	35	400	3 X 10 ¹⁵	3.4	1.14	80	2400	12 Months
1712	Epoxy	Translucent	8,000	87D	105	425	8 X 10 ¹⁵	3.2	1.14	75	2600	12 Months
1728	Epoxy	Translucent	45,000	81D	40	400	8 X 10 ¹⁵	3.2	1.16	70	3200	12 Months
1728HH	Epoxy	Translucent	55,000	85D	68	420	8 X 10 ¹⁵	3.2	1.14	70	3300	12 Months
1728HTG	Epoxy	Translucent	55,000	86D	93	420	8 X 10 ¹⁵	3.2	1.14	65	3500	12 Months
1728ETG	Epoxy	Translucent	55,000	87D	20	440	12 X 10 ¹⁵	3.2	1.14	65	3500	12 Months
1732	Epoxy	Translucent	45,000	60A	-5	400	1 X 10 ¹⁴	3.1	1.12	85	450	12 Months
1734	Epoxy	Clear	10,000	60A	-5	400	1 X 10 ¹⁴	3.1	1.12	85	450	12 Months
1738	Epoxy	Translucent	55,000	81D	37	400	1 X 10 ¹⁴	3.1	1.13	70	3200	12 Months
1738ETG	Epoxy	Translucent	57,000	87D	105	410	3 X 10 ¹⁵	3.2	1.13	70	3200	12 Months
1738LD-60	Epoxy	Translucent	50,000	60D	20	400	7 X 10 ¹⁵	3.1	1.13	65	3200	12 Months
1738VTG	Epoxy	Translucent	57,000	90D	130	400	1 X 10 ¹⁴	3.3	1.13	65	3200	12 Months
1748S-HTG	Epoxy	Translucent	55,000	85D	90	400	5 X 10 ¹⁵	3.2	1.17	65	3200	12 Months
1820	Epoxy	Clear	300	67D	10	420	4 X 10 ¹⁵	3.8	1.12	80	2400	12 Months
1821	Epoxy	Clear	300	50A	-5	400	2 X 10 ¹⁵	3.8	1.12	80	1900	12 Months
1822	Epoxy	Clear	400	80D	94	440	7 X 10 ¹⁵	3.8	1.13	75	3400	12 Months
1823	Epoxy	Clear	500	83D	100	450	9 X 10 ¹⁵	3.8	1.13	70	3900	12 Months

EMCAST UV and/or Thermal Cure Adhesives – Two Component												
Product	Color	Viscosity Mixed	Thermal Cure Temp.	Hardness	Tg°C	Diel. St. Volts/mil	Cure Method	Dielect Constant	Sp. Gravity	CTE ppm/°C	Working Life Mixed	Shelf life Unmixed @5C
607	Translucent	50,000	RT to 120°C	55D	30	450	UV & Heat	3.0	1.13	80	4-6 Hours	12 Months
610	Translucent	50,000	RT to 120°C	82D	85	470	UV & Heat	3.0	1.13	70	4-6 Hours	12 Months
612	Translucent	50,000	RT to 120°C	85D	125	470	UV & Heat	3.0	1.13	65	4-6 Hours	12 Months
614	Gray	25,000	RT to 120°C	880	125	125	UV & Heat	4.0	1.40	20	4-6 Hours	6 months

EMCAST Thermally Conductive Adhesives

Product	Color	Viscosity	Hardness	Tg°C	Diel. St. Volts/mil	Vol. Rest. OHM/CM	Thermal Conductivity	Filler	Dielect Constant	Sp. Gravity	CTE ppm/°C	Shelf life @ 0°C	Number of Components
752	Gray	40,000	84 D	90	425	5 X 10 ¹⁵	1.5 W/mK	Al ₂ O ₃	8.0	2.0	18.0	6 Months	2
753	Gray	150,000	72 D	60	425	5 X 10 ¹⁵	1.75 W/mK	Al ₂ O ₃	8.0	2.5	17.0	6 Months	1
755	Gray	400,000	88 D	160	425	5 X 10 ¹⁵	0.5 W/mK	All	N/A	2.2	20.0	6 Months	1
756	Gray	350,000	90 D	150	425	5 X 10 ¹⁵	2.7 W/mK	AlN	N/A	2.0	N/A	6 Months	1
758	Gray	100,000	81 D	120	425	5 X 10 ¹⁵	2.5 W/mK	AlN	N/A	N/A	N/A	6 Months	2

EMCAST UV and/or Thermal Cure Adhesives – Single Component

Product	Chemical Type	Viscosity	Minimum Thermal Cure Temp	Hardness	Tg°C	Diel. St. Volts/mil	Vol. Rest. OHMCM	Dielect Constant	Sp. Gravity	CTE ppm/°C	Shelf life @ 0°C
708	Epoxy	45,000	100°C	63 D	60	400	3 X 10 ¹⁴	3.1	1.2	70	1 Year
710	Epoxy	28,000	100°C	76 D	95	420	5 X 10 ¹⁴	3.1	1.2	68	1 Year
712	Epoxy	30,000	100°C	83 D	125	440	5 X 10 ¹⁴	3.1	1.2	67	1 Year
748	Epoxy	50,000	100°C	85 D	75	410	5 X 10 ¹⁴	3.3	1.2	65	1 Year
AC-3723 Series	Acrylic	2,000-250,000	110°C	75D	40	N/A	N/A	N/A	1.1	75	6 months
AC-3724 Series	Acrylic	2,000-250,000	110°C	55D	35	N/A	N/A	N/A	1.1	75	6 months
AC-5001	Acrylic	1,250	110°C	82 D	60	135	N/A	N/A	1.11	75	6 months
AC-5002	Acrylic	1,000	110°C	88 D	135	N/A	N/A	N/A	1.11	75	6 months
AC-5004	Acrylic	4,000	110°C	91 D	140	N/A	N/A	N/A	1.11	65	6 months
AC-5005	Acrylic	4,000	110°C	77 D	45	N/A	N/A	N/A	1.11	80	6 months

EMCAST Electrically Conductive Adhesives

Product	Color	Viscosity	Hardness	Tg°C	Vol. Rest. OHM/CM	Thermal Conductivity W/mK	Filler	Sp. Gravity	CTE	Elongation	Shelf life @ 0°C	Number of Components
501	Silver	15,000	85D	125	0.002	>30	Silver	3.5	28	3.0	6 months	1
510	Silver	17,000	82D	130	0.01	>25	Silver	2.1	35	3.0	6 months	1
530	Black	18,000	90D	140	0.001	15	Nickel	2.1	25	3.0	6 months	1
561	Silver	30,000	80D	85	0.005	>30	Silver	2.3	40	6.0	6 months	2
591	Black	100,000	85D	100	0.01	15	Nickel	3.1	40	4.0	6 months	2

DIEBOND Surface Mount and Thermal Cure Adhesives

Product	Color	Viscosity	Hardness	Tg°C	Diel. St. Volts/mil	Vol. Rest. OHM/CM	Thermal Conductivity W/m°C	Dielect Constant	Sp. Gravity	CTE	Number of Components	Shelf life @ 0°C
4460	Green	60,000	84D	110	400	3 X 10 ¹⁴	0.1	3.3	1.15	60	2	1 year Un-Mixed
4607	Red	1,500,000	89D	74	450	2 X 10 ¹⁵	0.4	3.7	1.2	80	1	1 Year
4609	Red	1,250,000	85D	71	440	2 X 10 ¹⁵	0.4	3.7	1.2	80	1	1 Year
4610	Yellow	1,250,000	89D	71	450	2 X 10 ¹⁵	0.4	3.7	1.2	80	1	1 Year
4612	Yellow	2,400,000	87D	155	450	2 X 10 ¹⁵	0.3	3.1	1.36	55	1	1 Year

EMCAST Thermal Cure Adhesives

Product	Color	Viscosity	Hardness	Tg°C	Diel. St. Volts/mil	Vol. Rest. OHM/CM	Thermal Conductivity W/m°C	Dielect Constant	Sp. Gravity	CTE	Number of Components	Shelf life @ 0°C
4180	Black	6,000	82D	120	420	3 X 10 ¹⁴	0.1	3.3	1.15	60	1	6 months
4114	Hazy Amber	7,500	55A	-10	420	5 X 10 ¹⁴	0.1	3.2	1.15	75	1	6 months

CHIPSHIELD UV and/or Thermal Cure Encapsulants & Chip Coatings

Product	Color	Viscosity	Hardness	Tg°C	Diel. St. Volts/mil	Vol. Rest. OHM/CM	Thermal Conductivity W/m°C	Filler %	Dielect Constant	Sp. Gravity	CTE ppm/°C	Shelf life @ 0°C 1 Component
2321	Gray	80,000	94D	150	425	5 X 10 ¹⁵	0.6	64	3.3	1.6-1.8	28	6 months
2322	Gray	75,000	95D	160	425	5 X 10 ¹⁵	0.6	65	3.3	1.6-1.8	25	6 months
2323	Gray	175,000	95D	160	425	5 X 10 ¹⁵	0.6	65	3.3	1.6-1.8	24	6 months
2400	Gray	175,000	90D	160	425	7 X 10 ¹⁵	0.7	75	3.2	1.6-1.8	20	6 months
2401	Gray	300,000	95D	162	425	5 X 10 ¹⁵	0.7	75	3.2	1.6-1.8	16	6 months
2510	Gray	20,000	92D	150	425	5 X 10 ¹⁵	0.6	66	3.3	1.6-1.8	25	6 months
2520	Gray	12,000	70D	60	425	6.6 X 10 ¹⁵	0.4	40	3.2	1.6-1.8	40	6 months
2590	Gray	11,000	90D	130	425	6 X 10 ¹⁵	0.4	50	3.3	1.5-1.6	30	6 months
2610	Gray	17,000	92D	150	425	7 X 10 ¹⁵	0.6	70	3.3	1.6-1.8	27	6 months

EMAST UV Cure Encapsulants & Chip Coatings – One Component

Product	Color	Viscosity	Hardness	Tg°C	Diel. St. Volts/mil	Vol. Rest. OHM/CM	Thermal Conductivity W/m°C	Filler %	Dielect Constant	Sp. Gravity	CTE	Elongation %	Shelf life @ 0°C
1500- LI	Gray	15,000	90D	160	450	9 X 10 ¹⁴	0.8	50%	3.5	1.5	33	2	1 Year
1510	Gray	20,000	88D	110	450	8 X 10 ¹⁴	0.2	50%	3.2	1.5	30	3	1 Year
1550	Gray	7,500	68D	30	410	4 X 10 ¹⁴	0.8	50%	3.5	1.5	35	5	1 Year
1551	Gray	50,000	90D	30	410	5 X 10 ¹⁴	0.8	50%	3.5	1.5	34	8	1 Year

All data in this bulletin is based on our own research and the research of others. They are believed to be accurate, however no guarantee of accuracy is made. Product description is sold without warranty except conformity to specification and on condition that the purchasers shall determine suitability for their particular purpose.



Electronic Materials Inc

1814 Airport Road Breckenridge, CO 80424

Phone (970) 547-0807 Fax (970) 547-0817 E-mail: info@electronicmaterialsinc.com

www.electronicmaterialsinc.com

EMI is an ISO 9001 Registered Company

Revision Date: 04/2005