

NASA OUTGASSING APPROVED PRODUCTS

from Emerson & Cuming

Product	Description	TML %	CVCM %	WVR %	Testing Cure Schedule
ELECTRICALLY CONDUCTIVE PASTES					
84-1LMIT1	Low viscosity, high thermal conductivity, excellent adhesion to gold	0.12	0.01	0.09	2 hrs @ 125°C
8700E	High temperature resistance, high strength, excellent adhesion to gold	0.30	0.00	0.25	2 hrs @ 121°C
967-1	Low temperature cure	0.54	0.01	0.28	2 hrs @ 100°C
976-1	Flexible, low viscosity	0.71	0.10	0.28	1 hr @ 150°C
56C/Catalyst 9	Two component, room temperature cure	0.19	0.02	0.05	7 days @ 25°C
56C/Catalyst 11	Two component, high temperature resistance	0.31	0.01	0.09	3 hrs @ 100°C
ELECTRICALLY INSULATING AND THERMALLY CONDUCTIVE PASTES					
281	One component, good chemical resistance and electrical insulation	0.46	0.01	0.11	30 min @ 150°C
285/Catalyst 11	High bond strength, low CTE	0.28	0.01	N/A	8 hrs @ 82°C
285/Catalyst 23LV	High bond strength, low CTE, room temperature cure	0.93	0.02	0.12	7 days @ 25°C
285/Catalyst 9	High bond strength, low CTE, room temperature cure	0.32	0.01	0.10	24 hrs @ 25°C
84-3	One component die attach adhesive	0.35	0.00	0.16	1 hr @ 150°C
8700K	One component, designed for hybrid component attach, excellent adhesion to gold	0.59	0.00	0.52	2 hrs @ 121°C
ELECTRICALLY CONDUCTIVE FILMS					
5025E	Ideal for RF power applications	0.30	0.06	0.08	1 hr @ 149°C
ECF561E	Flexible, high electrical conductivity	0.38	0.07	0.07	2 hrs @ 120°C
ECF568	Low temperature cure, superior adhesion to most surfaces	0.44	0.02	0.21	2 hrs @ 95°C
ELECTRICALLY INSULATIVE AND THERMALLY CONDUCTIVE FILMS					
5020K	Superior adhesion to gold plated surfaces, designed for use in hermetic packages	0.24	0.02	0.18	1 hr @ 150°C
550	High strength for difficult to bond substrates	0.41	0.01	0.24	1 hr @ 150°C
550K	High strength for difficult to bond substrates, designed for heat sink attach	0.31	0.04	0.15	2 hrs @ 125°C
ENCAPSULANTS					
2651/Catalyst 11	Dielectric grade with excellent adhesion, certified to MIL-I-16923	0.63	0.01	0.22	3 hrs @ 100°C
2651/Catalyst 23LV	Dielectric grade with excellent adhesion, thermal shock and impact resistance	0.66	0.03	0.11	24 hrs @ 25°C
2651MM/Catalyst 9	Low viscosity, non abrasive filler for machine dispense applications, room temperature cure	0.38	0.00	0.19	7 days @ 25°C
2850FT/Catalyst 11	Low viscosity encapsulant, non abrasive filler for machine dispense applications	0.38	0.01	0.11	12 hrs @ 85°C
2850FT/Catalyst 23LV	Thermally conductive, low CTE, excellent electrically insulative properties	0.48	0.01	0.11	69 hrs @ 25°C
2850FT/Catalyst 9	Thermally conductive, low CTE, excellent electrically insulative properties, room temperature cure	0.25	0.01	0.08	24 hrs @ 25°C

TML: Total Mass Loss - CVCM: Collected Volatile Condensable Materials - WVR: Water Vapor Regained

MIL STD 883, METHOD 5011 APPROVED PRODUCTS from Emerson & Cuming

Product	Description
ELECTRICALLY CONDUCTIVE PASTES	
84-1LMINB	High purity die attach adhesive
84-1LMNISR4	Low viscosity, thixotropic die attach material for high speed dispense, ideal for small dot applications
84-1LMIT1	Low viscosity, high thermal conductivity, excellent adhesion to gold
85-1	Gold filled epoxy adhesive, designed for hybrid applications where silver migration is a concern
8175	Microelectronics grade, stress absorbing
8700E	High temperature resistance, high strength, excellent adhesion to gold
ELECTRICALLY INSULATING AND THERMALLY CONDUCTIVE PASTES	
84-3	One component die attach adhesive
8700K	One component, designed for hybrid component attach, excellent adhesion to gold
ELECTRICALLY CONDUCTIVE FILMS	
5025E	Ideal for RF power applications
ECF564A	Excellent chemical and moisture resistance
ELECTRICALLY INSULATIVE AND THERMALLY CONDUCTIVE FILMS	
5020K	Superior adhesion to gold plated surfaces, designed for use in hermetic packages
564A	Excellent chemical and moisture resistance

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