ALLIANCE MEMORY MDS REPORT

Part Number:	**AS4C1G8D4D-62BCN / AS4C1G8D4D-62BIN**
Part Weight:	**163.03mg**

No.	**Part Name**	**Component wt (mg)**	**Material Content (Element)**	**CAS Number**	**Homogeneous materialt wt (%)**	**Element wt (mg)**	**wt % of Total unit wt**
1	Core	15.54	Thermosetting resin (including filler)	Trade Secret	50.000%	7.770	4.7660%
			Glass cloth	65997-17-3	50.000%	7.770	4.7660%
2	Copper foil	14.82	Copper foil	7440-50-8	100.000%	14.820	9.0904%
3	Solder mask	5.47	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1	1.800%	0.098	0.0604%
			Naphtha (petroleum), heavy aromatic	64742-94-5	1.800%	0.098	0.0604%
			TALC (CONTAINING NO ASBESTOS FIBRES)	14807-96-6	1.800%	0.098	0.0604%
			1,3,5-Triazine-2,4,6-triamine	108-78-1	0.500%	0.027	0.0168%
			Naphthalene	91-20-3	0.200%	0.011	0.0067%
			Other components below reportable levels	Trade Secret	33.900%	1.854	1.1374%
			FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE AND PHENOL	9003-36-5	10.000%	0.547	0.3355%
			2-[[3-[(1-Oxoallyl)oxy]-2,2-bis[[(1-oxoallyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxoallyl)oxy]methyl]-1,3-propanediyldiacrylate	29570-58-9	5.000%	0.274	0.1678%
			2-[[3-Hydroxy-2,2-bis[[(1-oxoallyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxoallyl)oxy]methyl]-1,3-propanediyldiacrylate	60506-81-2	2.600%	0.142	0.0872%
			Other components below reportable levels	Trade Secret	42.400%	2.319	1.4226%
4	Ni plating	8.86	Nickel	7440-02-0	100.000%	8.860	5.4346%
5	Au plating	1.06	Gold	7440-57-5	100.000%	1.060	0.6502%
6	Cu plating	14.25	Copper	7440-50-8	100.000%	14.250	8.7407%
7	Mold compound	58.038	Epoxy resin	Trade Secret	7.000%	4.063	2.4920%
			Hardener	Trade Secret	7.000%	4.063	2.4920%
			Metal hydroxide	Trade Secret	15.600%	9.054	5.5535%
			Carbon black	1333-86-4	0.400%	0.232	0.1424%
			Amorphous silica	60676-86-0	70.000%	40.627	24.9197%
8	Die Adhesive	1.779	Silicon Dioxide	112926-008	19.000%	0.338	0.2073%
			2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	28.500%	0.507	0.3110%
			Butadiene, acrylonitrile polymer, carboxy-terminated, polymer with bisphenol A and epichlorohydrin	68610-41-3	23.800%	0.423	0.2597%
			Silica Filler	112926-00-8	19.000%	0.338	0.2073%
			Silane, dichlorodimethyl-, reaction products with silica	68611-44-9	9.500%	0.169	0.1037%
			tert-butyl peroxyneodecanoate	26748-41-4	0.101%	0.002	0.0011%
			4,4'-Isopropylidenediphenol	80-05-7	0.099%	0.002	0.0011%
9	Solder ball	24.414	Tin	7440-31-5	96.800%	23.633	14.4960%
			Silver	7440-22-4	3.000%	0.732	0.4493%
			Copper	7440-50-8	0.200%	0.049	0.0300%
10	Gold Wire	0.294	Gold	7440-57-5	99.000%	0.291	0.1785%
			Palladium	7440-05-3	0.998%	0.003	0.0018%
			Calcium	7440-70-2	0.002%	0.000	0.0000%
11	Die	18.505	Silicon	7440-21-3	99.682%	18.446	11.3146%
			Aluminum	7429-90-5	0.149%	0.028	0.0169%
			Tungston	7440-33-7	0.106%	0.020	0.0120%
			Titanium	7440-32-6	0.042%	0.008	0.0048%
			Boron	7440-42-8	0.006%	0.001	0.0007%
			Arsenic	7440-38-2	0.003%	0.001	0.0003%
			Phosphorous	7723-14-0	0.004%	0.001	0.0005%
			Copper	7440-50-8	0.005%	0.001	0.0006%
			Fluorine	7782-41-4	0.003%	0.001	0.0003%
						163.030	100.0000%

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Fax: 425-896-8628 Alliance Memory Inc. reserves the right to change products or specification without notice