ALLIANCE MEMORY MDS REPORT

Part Number:	AS4C128M8D3B-12BCN/AS4C128M8D3B-12BIN/AS4C128M8D3B-12BAN
Part Weight:	137.37mg

No.	Part Name	Material Name	Component wt (mg)	Material Content (Element)	CAS Number	Element wt (%)	Element wt (mg)	wt % of Total unit wt	PPM
1	Substrate	HL-832NXA / AUS 308	25.524	Continuous Filament Fiber Glass	65997-17-3	32.91%	8.400	6.11%	329100
				Cured thermosetting resin (including inorganic filler)	Trade secret	32.91%	8.400	6.11%	329100
				Talc containing no asbestiform fibers	14807-96-6	0.47%	0.119	0.09%	4660
				Morpholine derivative	Trade secret	0.47%	0.119	0.09%	4660
				Barium sulfate	7727-43-7	5.13%	1.308	0.95%	51260
				Silica, amorphous	7631-86-9	0.12%	0.030	0.02%	1165
				Dipropylene glycol monomethyl ether	34590-94-8	2.80%	0.714	0.52%	27960
				Naphthalene	91-20-3	0.12%	0.030	0.02%	1165
				Epoxy resin A	Trade secret	1.51%	0.387	0.28%	15145
				Epoxy resin B	85954-11-6	1.05%	0.268	0.19%	10485
				Copper	7440-50-8	19.94%	5.089	3.70%	199400
				Nickel	7440-02-0	2.02%	0.516	0.38%	20200
				Gold	7440-57-5	0.57%	0.145	0.11%	5700
2	Mold compound	CEL-9120HF	72.651	Epoxy resin	Trade Secret	5.40%	3.923	2.86%	54000
				Hardener	Trade secret	5.30%	3.851	2.80%	53000
				Carbon Black	1333-86-4	0.20%	0.145	0.11%	2000
				Amorphous silica	60676-86-0	86.65%	62.952	45.83%	866500
				Crystalline silica	14808-60-7	2.45%	1.780	1.30%	24500
3	Epoxy	6202C	1.001	2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	38.66%	0.387	0.28%	386600
				Butadiene, acrylonitrile polymer, carboxy-terminated, polymer with bisphenol A and epichlorohydrin	68610-41-3	28.26%	0.283	0.21%	282600
				Isodecyl alcohol,ethoxylated	61827-42-7	10.00%	0.100	0.07%	100000
				Silica Filler	112926-00-8	22.43%	0.225	0.16%	224300
				tert-butyl peroxyneodecanoate	26748-41-4	0.65%	0.007	0.00%	6500
4	Solder ball	SnAgCu	27.526	Tin	7440-31-5	96.50%	26.563	19.34%	965000
				Silver	7440-22-4	3.00%	0.826	0.60%	30000
				Copper	7440-50-8	0.50%	0.138	0.10%	5000
5	Gold wire	Au	0.254	Gold	7440-57-5	99.99%	0.254	0.18%	999900
				Others	Trade Secret	0.01%	0.000	0.00%	100
6	Die	Chip	10.414	Silicon	7440-21-3	100.00%	10.414	7.58%	1000000
			137.37			600.00%	137.370	100.00%	6000000