ALLIANCE MEMORY MDS REPORT

Part Number:	AS4C64M16D3LB-12BCN/AS4C64M16D3LB-12BIN/AS4C64M16D3LB-12BAN
Part Weight:	229.8mg

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	70.13	Talc containing no asbestiform fibers	14807-96-6	22.39%	15.703	6.83%	223914
				Morpholine derivative	Trade secret	22.39%	15.703	6.83%	223914
				Barium sulfate	7727-43-7	13.44%	9.423	4.10%	134372
				Silica, amorphous	7631-86-9	0.71%	0.499	0.22%	7112
				Dipropylene glycol monomethyl ether	34590-94-8	0.71%	0.499	0.22%	7112
				Naphthalene	91-20-3	7.82%	5.486	2.39%	78232
				Epoxy resin A	Trade secret	0.18%	0.125	0.05%	1778
				Epoxy resin B	85954-11-6	4.27%	2.993	1.30%	42672
				Continuous Filament Fiber Glass	65997-17-3	0.18%	0.125	0.05%	1778
				Bismaleimide/Triazine/Epoxy Resin	25722-66-1	2.31%	1.621	0.71%	23114
				Inorganic filler	21645-51-2	1.60%	1.122	0.49%	16002
				Copper	7440-50-8	23.29%	16.333	7.11%	232900
				Nickel	7440-02-0	0.57%	0.400	0.17%	5700
				Gold	7440-57-5	0.14%	0.098	0.04%	1400
2	Mold compound	CEL-1802HF	112.762	Epoxy resin1	Trade Secret	2.10%	2.368	1.03%	21000
				Epoxy resin2	Trade Secret	2.10%	2.368	1.03%	21000
				Hardener	Trade secret	5.30%	5.976	2.60%	53000
				Metal Hydroxide	Trade secret	3.85%	4.341	1.89%	38500
				Carbon Black	1333-86-4	0.20%	0.226	0.10%	2000
				Amorphous silica	60676-86-0	85.45%	96.355	41.93%	854500
				Crystalline silica	14808-60-7	1.00%	1.128	0.49%	10000
3	Epoxy	6202C	1.001	2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	30.00%	0.300	0.13%	300000
				Modified Epoxy Resin	Trade secret	30.00%	0.300	0.13%	300000
				Isodecyl alcohol,ethoxylated	Trade secret	10.00%	0.100	0.04%	100000
				others	Trade secret	30.00%	0.300	0.13%	300000
4	Solder ball	SnAgCu	33.878	Tin	7440-31-5	96.50%	32.692	14.23%	965000
				Silver	7440-22-4	3.00%	1.016	0.44%	30000
				Copper	7440-50-8	0.50%	0.169	0.07%	5000
5	Gold wire	Au	0.313	Gold	7440-57-5	99.99%	0.313	0.14%	999900
				Others	Trade Secret	0.01%	0.000	0.00%	100
6	Die	Chip	11.716	Silicon	7440-21-3	100.00%	11.716	5.10%	1000000
			229.8			600.00%	229.800	100.00%	6000000