



ALLIANCE MEMORY MDS REPORT

Part Number:		AS4C512M16D3LC-xxBCN / BIN							
Part Weight:		224.94mg							
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-932NX-A / AUS 308	57.59	Thermosetting resin (including filler)	Trade Secret	30.48%	17.551	7.80%	304750
				Glass cloth	65997-17-3	30.48%	17.551	7.80%	304750
				Talc containing no asbestiform fibers	14807-96-6	0.40%	0.228	0.10%	3960
				Morpholine derivative	Trade secret	0.40%	0.228	0.10%	3960
				Barium sulfate	7727-43-7	4.36%	2.509	1.12%	43560
				Silica, amorphous	7631-86-9	0.10%	0.057	0.03%	990
				Dipropylene glycol monomethyl ether	34590-94-8	2.38%	1.368	0.61%	23760
				Naphthalene	91-20-3	0.10%	0.057	0.03%	990
				Epoxy resin A	Trade secret	1.29%	0.741	0.33%	12870
				Epoxy resin B	85954-11-6	0.89%	0.513	0.23%	8910
				Copper	7440-50-8	25.75%	14.829	6.59%	257500
				Nickel	7440-02-0	2.98%	1.716	0.76%	29800
				Gold	7440-57-5	0.42%	0.242	0.11%	4200
2	Mold compound	CEL-9440ZHF	92.111	Epoxy Resin 1	Trade secret	4.00%	3.684	1.64%	40000
				Epoxy Resin 2	Trade secret	4.00%	3.684	1.64%	40000
				Hardener 1	Trade secret	4.00%	3.684	1.64%	40000
				Hardener 2	Trade secret	4.00%	3.684	1.64%	40000
				Carbon black	1333-86-4	0.20%	0.184	0.08%	2000
				Amorphous Silica 1	60676-86-0	73.80%	67.978	30.22%	738000
				Amorphous Silica 2	7631-86-9	10.00%	9.211	4.09%	100000
3	Epoxy	HR-9070	1.097	Epoxy resin	Trade secret	12.50%	0.137	0.06%	125000
				Phenol resin	Trade secret	12.50%	0.137	0.06%	125000
				SiO2 Filler	Trade secret	5.00%	0.055	0.02%	50000
				(Meta) Acrylic Copolymer	Trade secret	70.00%	0.768	0.34%	700000
4	Epoxy	EM-310	4.187	Epoxy resin	Trade secret	25.00%	1.047	0.47%	250000
				Phenol resin	Trade secret	25.00%	1.047	0.47%	250000
				Silica, amorphous	7631-86-9	35.00%	1.465	0.65%	350000
				Synthetic rubber	Trade secret	15.00%	0.628	0.28%	150000
5	Solder ball	SnAgCu	33.878	Tin	7440-31-5	96.50%	32.692	14.53%	965000
				Silver	7440-22-4	3.00%	1.016	0.45%	30000
				Copper	7440-50-8	0.50%	0.169	0.08%	5000
6	Gold wire	Au	1.237	Gold	7440-57-5	99.99%	1.237	0.55%	999900
				The Others	Trade Secret	0.01%	0.000	0.00%	100
7	Die	Chip	34.84	Silicon	7440-21-3	100.00%	34.840	15.49%	1000000
224.94				700.00%		224.940	100.00%	7000000	