



ALLIANCE MEMORY MDS REPORT

Part Number:		AS4C128M8D3LC-12BCN / AS4C128M8D3LC-12BIN								
Part Weight:		137.06mg								
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-832NX-A / AUS 308	28.886	Talc containing no asbestiform fibers	14807-96-6	27.26%	0.110	0.08%	272600	
				Morpholine derivative	Trade secret	27.26%	0.110	0.08%	272600	
				Barium sulfate	7727-43-7	0.38%	1.213	0.88%	3816	
				Silica, amorphous	7631-86-9	0.38%	0.028	0.02%	3816	
				Dipropylene glycol monomethyl ether	34590-94-8	4.20%	0.661	0.48%	41976	
				Naphthalene	91-20-3	0.10%	0.028	0.02%	954	
				Epoxy resin A	Trade secret	2.29%	0.358	0.26%	22896	
				Epoxy resin B	85954-11-6	0.10%	0.248	0.18%	954	
				Thermosetting resin (including filler)	Trade Secret	1.24%	7.874	5.75%	12402	
				Glass cloth	65997-17-3	0.86%	7.874	5.75%	8586	
				Copper	7440-50-8	9.48%	2.738	2.00%	94800	
				Copper	7440-50-8	22.14%	6.395	4.67%	221400	
				Nickel	7440-02-0	3.79%	1.095	0.80%	37900	
Gold	7440-57-5	0.53%	0.153	0.11%	5300					
2	Mold compound	CEL-9120HF	72.132	Epoxy resin 1	Trade Secret	4.00%	2.885	2.11%	40000	
				Epoxy resin 2	Trade Secret	4.00%	2.885	2.11%	40000	
				Hardener	Trade Secret	5.00%	3.607	2.63%	50000	
				Metal hydroxide	Trade Secret	15.00%	10.820	7.89%	150000	
				Carbon black	1333-86-4	0.50%	0.361	0.26%	5000	
				Amorphous silica 1	60676-86-0	60.00%	43.279	31.58%	600000	
Amorphous silica 2	7631-86-9	11.50%	8.295	6.05%	115000					
3	Epoxy	6202C	0.733	2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	36.50%	0.268	0.20%	365000	
				Butadiene, acrylonitrile polymer, carboxy-terminated, polymer with bisphenol A and epichlorohydrin	68610-41-3	28.00%	0.205	0.15%	280000	
				Isodecyl alcohol, ethoxylated	61827-42-7	10.00%	0.073	0.05%	100000	
				Silica Filler	112926-00-8	25.00%	0.183	0.13%	250000	
				Tert-butyl peroxyneodecanoate	26748-41-4	0.50%	0.004	0.00%	5000	
4	Solder ball	SnAgCu	27.526	Tin	7440-31-5	96.50%	26.563	19.38%	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	0.161	Gold	7440-57-5	99.99%	0.161	0.12%	999900	
				Others	Trade Secret	0.01%	0.000	0.00%	100	
6	Die	Chip	7.622	Silicon	7440-21-3	100.00%	7.622	5.56%	1000000	
			137.06				600.00%	137.060	100.00%	6000000