



ALLIANCE MEMORY MDS REPORT

Part Number:		AS4C64M16D2A-25BCN/AS4C64M16D2A-25BIN/AS4C64M16D2A-25BAN								
Part Weight:		192.07mg								
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	53.02	Continuous Filament Fiber Glass	65997-17-3	21.07%	11.170	5.82%	210683.88	
				Bismaleimide/Triazine/Epoxy Resin	25722-66-1	21.07%	11.170	5.82%	210683.88	
				Inorganic filler	21645-51-2	12.64%	6.703	3.49%	126432.24	
				Talc containing no asbestiform fibers	14807-96-6	0.65%	0.344	0.18%	6492	
				Morpholine derivative	Trade secret	0.65%	0.344	0.18%	6492	
				Barium sulfate	7727-43-7	7.14%	3.786	1.97%	71412	
				Silica, amorphous	7631-86-9	0.16%	0.086	0.04%	1623	
				Dipropylene glycol monomethyl ether	34590-94-8	3.90%	2.065	1.08%	38952	
				Naphthalene	91-20-3	0.16%	0.086	0.04%	1623	
				Epoxy resin A	Trade secret	2.11%	1.119	0.58%	21099	
				Epoxy resin B	85954-11-6	1.46%	0.774	0.40%	14607	
				Copper	7440-50-8	28.72%	15.227	7.93%	287200	
				Nickel	7440-02-0	0.23%	0.122	0.06%	2300	
				Gold	7440-57-5	0.04%	0.021	0.01%	400	
2	Mold compound	CEL-1802HF	98.305	Epoxy resin1	Trade Secret	2.10%	2.064	1.07%	21000	
				Epoxy resin2	Trade Secret	2.10%	2.064	1.07%	21000	
				Hardener	Trade secret	5.30%	5.210	2.71%	53000	
				Metal Hydroxide	Trade secret	3.85%	3.785	1.97%	38500	
				Carbon Black	1333-86-4	0.20%	0.197	0.10%	2000	
				Amorphous silica	60676-86-0	85.45%	84.001	43.73%	854500	
				Crystalline silica	14808-60-7	1.00%	0.983	0.51%	10000	
3	Epoxy	6202C	0.86	2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	30.00%	0.258	0.13%	300000	
				Modified Epoxy Resin	Trade secret	30.00%	0.258	0.13%	300000	
				Isodecyl alcohol,ethoxylated	Trade secret	10.00%	0.086	0.04%	100000	
				others	Trade secret	30.00%	0.258	0.13%	300000	
4	Solder ball	Sn/Ag/Cu	29.643	Tin	7440-31-5	96.50%	28.606	14.89%	965000	
				Silver	7440-22-4	3.00%	0.889	0.46%	30000	
				Copper	7440-50-8	0.50%	0.148	0.08%	5000	
5	Gold wire	Au	0.18	Gold	7440-57-5	99.99%	0.180	0.09%	999900	
				Others	Trade Secret	0.01%	0.000	0.00%	100	
6	Die	Chip	10.062	Silicon	7440-21-3	100.00%	10.062	5.24%	1000000	
			192.07				600.00%	192.070	100.00%	6000000

Alliance Memory Inc. 511 Taylor Way, San Carlos, CA 94070 TEL: (650) 610-6800 FAX: (650) 620-9211 Alliance Memory Inc. reserves the right to change products or specification without notice