



ALLIANCE MEMORY MDS REPORT

Part Number:		AS4C128M16D3A-12BCN / AS4C128M16D3A-12BIN AS4C128M16D3A-12BAN								
Part Weight:		185.38mg								
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	NPG-200 / AUS 308	37.222	E-Glass Fabric	65997-17-3	23.24%	8.652	4.67%	232446.284	
				Epoxy Resin	29690-82-2	23.24%	8.652	4.67%	232446.284	
				Fillers	21645-51-2	7.75%	2.883	1.56%	77464.532	
				DOPO	35948-25-5	11.62%	4.327	2.33%	116242.9	
				Talc containing no asbestiform fibers	14807-96-6	0.43%	0.159	0.09%	4284	
				Morpholine derivative	Trade secret	0.43%	0.159	0.09%	4284	
				Barium sulfate	7727-43-7	4.71%	1.754	0.95%	47124	
				Silica, amorphous	7631-86-9	0.11%	0.040	0.02%	1071	
				Dipropylene glycol monomethyl ether	34590-94-8	2.57%	0.957	0.52%	25704	
				Naphthalene	91-20-3	0.11%	0.040	0.02%	1071	
				Epoxy resin A	Trade secret	1.39%	0.518	0.28%	13923	
				Epoxy resin B	85954-11-6	0.96%	0.359	0.19%	9639	
				Copper	7440-50-8	20.99%	7.813	4.21%	209900	
				Nickel	7440-02-0	1.92%	0.715	0.39%	19200	
Gold	7440-57-5	0.52%	0.194	0.10%	5200					
2	Mold compound	CEL-9120HF	96.768	Epoxy resin	Trade Secret	4.00%	3.871	2.09%	40000	
				Hardener	Trade secret	4.00%	3.871	2.09%	40000	
				Carbon black	1333-86-4	0.20%	0.194	0.10%	2000	
				Amorphous silica	60676-86-0	86.80%	83.995	45.31%	868000	
				Crystal silica	14808-60-7	5.00%	4.838	2.61%	50000	
3	Epoxy	6202C	1.513	2-(2-Ethoxyethoxy) ethyl acetate	112-15-2	30.00%	0.454	0.24%	300000	
				Modified Epoxy Resin	Trade secret	30.00%	0.454	0.24%	300000	
				Isodecyl alcohol, ethoxylated	Trade secret	10.00%	0.151	0.08%	100000	
				others	Trade secret	30.00%	0.454	0.24%	300000	
4	Solder ball	M705	33.878	Tin	7440-31-5	96.50%	32.692	17.64%	965000	
				Silver	7440-22-4	3.00%	1.016	0.55%	30000	
				Copper	7440-50-8	0.50%	0.169	0.09%	5000	
5	Gold wire	Au	0.257	Gold	7440-57-5	99.99%	0.257	0.14%	999900	
				Others	Trade Secret	0.01%	0.000	0.00%	100	
6	Die	Chip	15.742	Silicon	7440-21-3	100.00%	15.742	8.49%	1000000	
			185.38				600.00%	185.380	100.00%	6000000