



# ALLIANCE MEMORY MDS REPORT

Part Number:		AS4C256M8D3LA-12BCN / AS4C256M8D3LA-12BIN / AS4C256M8D3LA-12BAN								
Part Weight:		139.5mg								
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-180INBK / AUS 308	29.528	E-Glass Fabric	65997-17-3	25.03%	7.392	5.30%	250346	
				Epoxy Resin	29690-82-2	14.79%	4.368	3.13%	147932	
				Fillers	14808-60-7	14.79%	4.368	3.13%	147932	
				Phosphorous Flame Retardant	35948-25-5	2.28%	0.672	0.48%	22759	
				Talc containing no asbestiform fibers	14807-96-6	0.38%	0.111	0.08%	3766	
				Morpholine derivative	Trade secret	0.38%	0.111	0.08%	3766	
				Barium sulfate	7727-43-7	4.14%	1.223	0.88%	41425	
				Silica, amorphous	7631-86-9	0.09%	0.028	0.02%	941	
				Dipropylene glycol monomethyl ether	34590-94-8	2.26%	0.667	0.48%	22596	
				Naphthalene	91-20-3	0.09%	0.028	0.02%	941	
				Epoxy resin A	Trade secret	1.22%	0.361	0.26%	12239	
				Epoxy resin B	85954-11-6	0.85%	0.250	0.18%	8473	
				Copper	7440-50-8	29.17%	8.612	6.17%	291676	
Nickel	7440-02-0	3.53%	1.041	0.75%	35266					
Gold	7440-57-5	0.99%	0.294	0.21%	9942					
2	Mold compound	CEL-9120HF	64.958	Epoxy resin	Trade Secret	5.55%	3.605	2.58%	55500	
				Hardener	Trade secret	4.30%	2.793	2.00%	43000	
				Carbon Black	1333-86-4	0.20%	0.130	0.09%	2000	
				Amorphous silica	60676-86-0	87.45%	56.806	40.72%	874500	
				Crystalline silica	14808-60-7	2.50%	1.624	1.16%	25000	
3	Epoxy	6202C	1.513	2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	30.00%	0.454	0.33%	300000	
				Modified Epoxy Resin	Trade secret	30.00%	0.454	0.33%	300000	
				Isodecyl alcohol,ethoxylated	Trade secret	10.00%	0.151	0.11%	100000	
				others	Trade secret	30.00%	0.454	0.33%	300000	
4	Solder ball	M705	27.526	Tin	7440-31-5	96.50%	26.563	19.04%	965000	
				Silver	7440-22-4	3.00%	0.826	0.59%	30000	
				Copper	7440-50-8	0.50%	0.138	0.10%	5000	
5	Gold wire	Au	0.233	Gold	7440-57-5	99.99%	0.233	0.17%	999900	
				Others	Trade Secret	0.01%	0.000	0.00%	100	
6	Die	Chip	15.742	Silicon	7440-21-3	100.00%	15.742	11.28%	1000000	
			139.5				600.00%	139.500	100.00%	6000000