



ALLIANCE MEMORY MDS REPORT

Part Number:		AS4C128M16D2A-25BCN/AS4C128M16D2A-25BIN/AS4C128M16D2A-25BAN								
Part Weight:		190.83mg								
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 / AUS 308	77.41	Continuous Filament Fiber Glass	65997-17-3	19.35%	14.9753	7.85%	193453.8	
				Bismaleimide/Triazine/Epoxy Resin	25722-66-1	19.35%	14.9753	7.85%	193453.8	
				Inorganic filler	21645-51-2	11.61%	8.9867	4.71%	116092.4	
				Talc containing no asbestiform fibers	14807-96-6	0.89%	0.6852	0.36%	8852	
				Morpholine derivative	Trade secret	0.89%	0.6852	0.36%	8852	
				Barium sulfate	7727-43-7	9.74%	7.5376	3.95%	97372	
				Silica, amorphous	7631-86-9	0.22%	0.1713	0.09%	2213	
				Dipropylene glycol monomethyl ether	34590-94-8	5.31%	4.1114	2.15%	53112	
				Naphthalene	91-20-3	0.22%	0.1713	0.09%	2213	
				Epoxy resin A	Trade secret	2.88%	2.2270	1.17%	28769	
				Epoxy resin B	85954-11-6	1.99%	1.5418	0.81%	19917	
				Copper	7440-50-8	25.29%	19.5770	10.26%	252900	
				Nickel	7440-02-0	2.03%	1.5714	0.82%	20300	
Gold	7440-57-5	0.25%	0.1935	0.10%	2500					
2	Mold compound	CEL-9440ZHF	64.1123	Epoxy resin 1	Trade secret	4.03%	2.5837	1.35%	40300	
				Epoxy resin 2	Trade secret	5.64%	3.6159	1.89%	56400	
				Hardener 1	Trade secret	4.83%	3.0966	1.62%	48300	
				Hardener 2	Trade secret	4.83%	3.0966	1.62%	48300	
				Carbon black	1333-86-4	0.16%	0.1026	0.05%	1600	
				Amorphous silica	60676-86-0	76.49%	49.0395	25.70%	764900	
				Crystal silica	14808-60-7	4.02%	2.5773	1.35%	40200	
3	Epoxy	2025D	1.3435	Silica, Amorphous,Fused	60676-86-0	47.22%	0.6344	0.33%	472200	
				Bismaleimide monomer	Trade secret	33.53%	0.4505	0.24%	335300	
				Acrylate monomer	Trade secret	8.54%	0.1147	0.06%	85400	
				Epoxy resin	Trade secret	8.71%	0.1170	0.06%	87100	
				Acrylic resin	Trade secret	2.00%	0.0269	0.01%	20000	
4	Solder ball	M705	29.6433	Tin	7440-31-5	96.50%	28.6058	14.99%	965000	
				Silver	7440-22-4	3.00%	0.8893	0.47%	30000	
				Copper	7440-50-8	0.50%	0.1482	0.08%	5000	
5	Gold wire	Au	0.4332	Gold	7440-57-5	99.99%	0.4331	0.23%	999900	
				Others	Trade Secret	0.01%	0.0000	0.00%	100	
6	Die	Chip	17.8877	Silicon	7440-21-3	100.00%	17.8877	9.37%	1000000	
			190.83				600.00%	190.8300	100.00%	6000000