



ALLIANCE MEMORY MDS REPORT

Part Number:		AS4C128M16D3C-93BCN / AS4C128M16D3C-93BIN								
Part Weight:		165.93mg								
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-832NXA / AUS 308	35.913	Continuous Filament Fiber Glass	65997-17-3	27.15%	9.750	5.88%	271500	
				Cured thermosetting resin (including inorganic filler)	Trade secret	27.15%	9.750	5.88%	271500	
				Barium Sulfate	7727-43-7	1.56%	0.561	0.34%	15613.6	
				3-Methoxy-3-methylbutylacetate	Trade Secret	1.08%	0.387	0.23%	10768	
				Dipropylene Glycol Monomethyl Ether	34590-94-8	0.54%	0.193	0.12%	5384	
				Talc containing no asbestiform fibers	14807-96-6	0.13%	0.048	0.03%	1346	
				Morpholine derivative	Trade Secret	0.13%	0.048	0.03%	1346	
				Solvent naphtha(petroleum), Heavy arom	Trade Secret	0.13%	0.048	0.03%	1346	
				2,4,6-Triamino-1,3,5-Triazine	Trade Secret	0.13%	0.048	0.03%	1346	
				Silicon dioxide	Trade Secret	0.01%	0.005	0.00%	134.6	
				Diethylene Glycol Monoethyl Ether Acetate	Trade Secret	0.01%	0.005	0.00%	134.6	
				Naphthalene	91-20-3	0.01%	0.005	0.00%	134.6	
				Trimethylbenzene	Trade Secret	0.01%	0.005	0.00%	134.6	
				Epoxy Resin (MW≤700)	Trade Secret	4.04%	1.450	0.87%	40380	
				Barium Sulfate	7727-43-7	2.42%	0.870	0.52%	24228	
				Dipropylene Glycol Monomethyl Ether	34590-94-8	1.62%	0.580	0.35%	16152	
				Dipentaerythritol hexaacrylate	Trade Secret	0.81%	0.290	0.17%	8076	
				Dipentaerythritol pentaacrylate	Trade Secret	0.40%	0.145	0.09%	4038	
				3-Methoxy-3-methylbutylacetate	Trade Secret	0.40%	0.145	0.09%	4038	
				Copper	7440-50-8	30.11%	10.813	6.52%	301100	
Nickel	7440-02-0	1.66%	0.596	0.36%	16600					
Gold	7440-57-5	0.47%	0.169	0.10%	4700					
2	Mold compound	CEL--9120HF	82.104	Epoxy resin	Trade Secret	5.00%	4.105	2.47%	50000	
				2,2'-((3,3',5,5'-tetramethy-(1,1'-biphenyl)-4,4'-diyl)-bis(oxymethylene))-bis-oxirane	Trade Secret	5.00%	4.105	2.47%	50000	
				Hardener	Trade Secret	5.00%	4.105	2.47%	50000	
				Carbon black	1333-86-4	0.20%	0.164	0.10%	2000	
				Amorphous silica 1	60676-86-0	80.80%	66.340	39.98%	808000	
Amorphous silica 2	7631-86-9	4.00%	3.284	1.98%	40000					
3	Epoxy	6202C	1.271	2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	36.50%	0.464	0.28%	365000	
				Butadiene, acrylonitrile polymer, carboxy-terminated, polymer with bisphenol A and epichlorohydrin	68610-41-3	28.00%	0.356	0.21%	280000	
				Isodecyl alcohol, ethoxylated	61827-42-7	10.00%	0.127	0.08%	100000	
				Silica Filler	112926-00-8	25.00%	0.318	0.19%	250000	
				Tert-butyl peroxyneodecanoate	26748-41-4	0.50%	0.006	0.00%	5000	
4	Solder ball	SnAgCu	33.878	Tin	7440-31-5	96.50%	32.692	19.70%	965000	
				Silver	7440-22-4	3.00%	1.016	0.61%	30000	
				Copper	7440-50-8	0.50%	0.169	0.10%	5000	
5	Gold wire	Au	0.208	Gold	7440-57-5	99.99%	0.208	0.13%	999900	
				Others	Trade Secret	0.01%	0.000	0.00%	100	
6	Die	Chip	12.556	Silicon	7440-21-3	100.00%	12.556	7.57%	1000000	
			165.93				600.00%	165.930	100.00%	600000