



ALLIANCE MEMORY MDS REPORT

Part Number:		AS4C512M16D3LA-10BxN						
Part Weight (mg):		238.038						UOM = mg
NO.	Part Name	Material Name	Component wt (mg)	Substance in Materials	CAS Number	Element wt (%)	Substance Weight(mg)	wt % of Total unit wt
1	Top Chip	25nm	27.005	Silica	7440-21-3	100.00%	27.0050	11.345%
2	Bottom Chip	25nm	27.005	Silica	7440-21-3	100.00%	27.0050	11.345%
3	PCB Substrate	CCL	12.15	Cured thermosetting resin (including inorganic	Trade Secret	56.52%	6.8670	2.885%
				Coninuous Filament Fiber Glass	65997-17-3	43.48%	5.2830	2.219%
		3EC Series	29.135	Copper	7440-50-8	100.00%	29.1350	12.240%
		Au Plating	0.147	Gold	13967-50-5	100.00%	0.1470	0.062%
		Ni Plating	1.360	Nickel	7440-02-0	100.00%	1.3600	0.571%
4	Substrate Solder Mask	PSR 4000 AUS-308	7.103	Acrylate resin	Trade secret	25.50%	1.8110	0.761%
				Phthalocyanine blue	147-14-8	0.10%	0.0070	0.003%
				Organic Pigment	Trade secret	0.10%	0.0070	0.003%
				Barium Sulfate	7727-43-7	25.50%	1.8110	0.761%
				Silica	7631-86-9	0.41%	0.0290	0.012%
				Talc	14807-96-6	0.10%	0.0070	0.003%
				Aromatic carbonyl compounds	Trade secret	2.51%	0.1780	0.075%
				Amine Compound	Trade secret	0.41%	0.0290	0.012%
				Antifoamer & Leveling agent	Trade secret	1.00%	0.0710	0.030%
				Diethylene glycol monoethyl ether acetate	112-15-2	0.10%	0.0070	0.003%
				Dipropylene glycol monomethyl ether	34590-94-8	9.09%	0.6460	0.271%
				3-methoxy-3-methyl butyl acetate	103429-90-9	14.30%	1.0160	0.427%
				Solvent naphtha(petroleum), Heavy arom.	64742-94-5	2.39%	0.1700	0.071%
				Acrylate monomer	Trade secret	3.90%	0.2770	0.116%
				Epoxy Resin	Trade secret	13.30%	0.9450	0.397%
				Organic Filler	Trade secret	1.30%	0.0920	0.039%
				5	Die Attach	EM-760/ EM710	2.258	Acrylic resin
Phenol resin	Trade secret	15.01%	0.3390					0.142%
Amorphous Silica	7631-86-9	45.00%	1.0160					0.427%
6	Die Attach	EM-310/ EM-500M3	5.419	Solid epoxy resin	Trade secret	15.00%	0.8130	0.342%
				Liquid epoxy resin	Trade secret	15.00%	0.8130	0.342%
				Phenol resin	Trade secret	20.00%	1.0840	0.455%
				Amorphous Silica	7631-86-9	39.99%	2.1670	0.910%
				Synthetic rubber	Trade secret	10.00%	0.5420	0.228%
7	Gold Wire	Gold	1.289	Gold	7440-57-5	100.00%	1.2890	0.542%
8	Compound	EME-G-771	91.070	Epoxy resin A	Trade Secret	3.00%	2.7320	1.148%
				Epoxy resin B	Trade Secret	3.00%	2.7320	1.148%
				Phenol resin A	Trade Secret	3.00%	2.7320	1.148%
				Phenol resin B	Trade Secret	3.00%	2.7320	1.148%
				Silica (Amorphous) A	60676-86-0	77.00%	70.1240	29.459%
				Silica (Amorphous) B	7631-86-9	7.00%	6.3750	2.678%
				Metal Hydroxide	Trade Secret	3.00%	2.7320	1.148%
				Carbon Black	1333-86-4	1.00%	0.9110	0.383%
				Tin	7440-31-5	96.80%	33.0060	13.866%
9	Solder Ball	SAC302	34.097	Silver	7440-22-4	3.00%	1.0230	0.430%
				Copper	7440-50-8	0.20%	0.0680	0.029%