ALLIANCE MEMORY

ALLIANCE MEMORY MDS REPORT

Part Number:	AS4C32M16D3L-12BCN/AS4C32M16D3L-12BIN								
Part Weight:	177.592mg								
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	47.31	Continuous Filament Fiber Glass	65997-17-3	11.32%	5.355	3.02%	113188
				Bismaleimide/Triazine/Epoxy Resin	25722-66-1	11.32%	5.355	3.02%	113188
				Inorganic filler	21645-51-2	6.79%	3.214	1.81%	67924
				Talc containing no asbestiform fibers	14807-96-6	1.00%	0.475	0.27%	10036
				Morpholine derivative	Trade secret	1.00%	0.475	0.27%	10036
				Barium sulfate	7727-43-7	11.04%	5.223	2.94%	110396
				Silica, amorphous	7631-86-9	0.25%	0.119	0.07%	2509
				Dipropylene glycol monomethyl ether	34590-94-8	6.02%	2.849	1.60%	60216
				Naphthalene	91-20-3	0.25%	0.119	0.07%	2509
				Epoxy resin A	Trade secret	3.26%	1.543	0.87%	32617
				Epoxy resin B	85954-11-6	2.26%	1.068	0.60%	22581
				Copper	7440-50-8	42.08%	19.908	11.21%	420800
				Nickel	7440-02-0	3.13%	1.481	0.83%	31300
				Gold	7440-57-5	0.27%	0.128	0.07%	2700
2	Mold compound	CEL-9120HF	88.959	Epoxy resin	Trade Secret	4.20%	3.736	2.10%	42000
				Hardener	Trade secret	4.30%	3.825	2.15%	43000
				Carbon Black	1333-86-4	0.20%	0.178	0.10%	2000
				Amorphous silica	60676-86-0	86.55%	76.994	43.35%	865500
				Crystalline silica	14808-60-7	4.75%	4.226	2.38%	47500
3	Epoxy	6202C	0.635	2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	35.20%	0.223	0.13%	352000
				Butadiene, acrylonitrile polymer, carboxy-terminated, polymer with bisphenol A and epichlorohydrin	68610-41-3	26.30%	0.167	0.09%	263000
				Isodecyl alcohol,ethoxylated	7631-86-9	9.40%	0.060	0.03%	94000
				Silica Filler	112926-00-8	28.50%	0.181	0.10%	285000
				tert-butyl peroxyneodecanoate	26748-41-4	0.60%	0.004	0.00%	6000
4	Solder ball	SnAgCu	33.878	Tin	7440-31-5	96.50%	32.692	18.41%	965000
				Silver	7440-22-4	3.00%	1.016	0.57%	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	0.12%	999900
				Others	Trade Secret	0.01%	0.000	0.00%	100
6	Die	Chip	6.602	Silicon	7440-21-3	100.00%	6.602	3.72%	1000000
			177.592			600.00%	177.592	100.00%	6000000

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Alliance Memory Inc. reserves the right to change products or specification without notice