ALLIANCE MEMORY MDS REPORT

Part Number:	AS4C512M8D3LC-10BCN / AS4C512M8D3LC-12BCN / AS4C512M8D3LC-12BIN							
Part Weight:	148.16mg							
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-A / AUS308	44	Continuous Filament Fiber Glass	65997-17-3	6.70%	2.946	1.99%	66950
				Cured thermosetting resin (including inorganic filler)	Trade secret	6.70%	2.946	1.99%	66950
				Barium Sulfate	7727-43-7	1.48%	0.652	0.44%	14824.8
				3-Methoxy-3-methylbutylacetate	103429-90-9	1.02%	0.450	0.30%	10224
				Dipropylene Glycol Monomethyl Ether	34590-94-8	0.51%	0.225	0.15%	5112
				Talc containing no asbestiform fibers	14807-96-6	0.13%	0.056	0.04%	1278
				Morpholine derivative	Trade Secret	0.13%	0.056	0.04%	1278
				Solvent naphtha(petroleum), Heavy arom	Trade Secret	0.13%	0.056	0.04%	1278
				2,4,6-Triamino-1,3,5-Triazine	Trade Secret	0.13%	0.056	0.04%	1278
				Silicon dioxide	Trade Secret	0.01%	0.006	0.00%	127.8
				Diethylene Glycol Monoethyl Ether Acetate	Trade Secret	0.01%	0.006	0.00%	127.8
				Naphthalene	91-20-3	0.01%	0.006	0.00%	127.8
				Trimethylbenzene	Trade Secret	0.01%	0.006	0.00%	127.8
2	Mold compound	CEL-1702HF	48.051	Epoxy Resin (MW≦700)	Trade Secret	3.83%	1.687	1.14%	38340
				Barium Sulfate	7727-43-7	2.30%	1.012	0.68%	23004
				Dipropylene Glycol Monomethyl Ether	34590-94-8	1.53%	0.675	0.46%	15336
				Dipentaerythritol hexaacrylate	Trade Secret	0.77%	0.337	0.23%	7668
				Dipentaerythritol pentaacrylate	Trade Secret	0.38%	0.169	0.11%	3834
				3-Methoxy-3-methylbutylacetate	103429-90-9	0.38%	0.169	0.11%	3834
				Copper	7440-50-8	50.75%	22.330	15.07%	507500
				Nickel	7440-02-0	20.63%	9.077	6.13%	206300
				Gold	7440-57-5	2.45%	1.078	0.73%	24500
				Epoxy resin	Trade Secret	2.30%	1.105	0.75%	23000
				2,2'-((3,3',5,5'-tetramethy-(1,1'-biphenyl)-4,4'-diyl)-bis(oxymethylene))-bis-oxirane	Trade Secret	5.00%	2.403	1.62%	50000
				Formaldehyde, polymer with 2-(chloromethyl)oxirane and 2-methylphenol	Trade Secret	2.30%	1.105	0.75%	23000
				Hardener	Trade Secret	3.30%	1.586	1.07%	33000
				Carbon black	1333-86-4	0.20%	0.096	0.06%	2000
				Amorphous silica 1	60676-86-0	85.00%	40.843	27.57%	850000
				Amorphous silica 2	7631-86-9	1.90%	0.913	0.62%	19000
3	Epoxy	6202C	2.233	2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	36.50%	0.815	0.55%	365000
				Butadiene, acrylonitrile polymer, carboxy-terminated, polymer with bisphenol A and epichlorohydrin	68610-41-3	28.00%	0.625	0.42%	280000
				Isodecyl alcohol, ethoxylated	61827-42-7	10.00%	0.223	0.15%	100000
				Silica Filler	112926-00-8	25.00%	0.558	0.38%	250000
				Tert-butyl peroxyneodecanoate	26748-41-4	0.50%	0.011	0.01%	5000
4	Solder ball	96.5Sn3Ag0.5Cu	27.526	Tin	7440-31-5	96.50%	26.563	17.93%	965000
				Silver	7440-22-4	3.00%	0.826	0.56%	30000
				Copper	7440-50-8	0.50%	0.138	0.09%	5000
5	Gold wire	Au	0.22	Gold	7440-57-5	99.99%	0.220	0.15%	999900
				Others	Trade Secret	0.01%	0.000	0.00%	100
6	Die	Chip	26.13	Silicon	7440-21-3	100.00%	26.130	17.64%	1000000
			148.16			600.00%	148.160	100.00%	6000000.000

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Fax: 425-896-8628 Alliance Memory Inc. reserves the right to change products or specification without notice