



ALLIANCE MEMORY MDS REPORT

Part Number:			AS4C128M16D3LB-12BCN							
Wieght (mg):			175.261							
No.	Part Name	Material Name	Part no.	Component wt (mg)	Substance in Materials	CAS Number	Material mass (%)	Substance (%)	Element wt (mg)	wt % of Total unit wt
1	Substrate	LAMINATE	NPG-200	20.8008	E-Glass Fabric	65997-17-3	11.87%	37.50%	7.8003	4.4507%
					Epoxy Resin	29690-82-2		37.50%	7.8003	4.4507%
					Fillers	19287-45-7		12.50%	2.6001	1.4836%
					DOPO	35948-25-5		12.50%	2.6001	1.4836%
		Copper foil	Copper foil	11.6995	Copper	7440-50-8	6.68%	100.00%	11.6995	6.6755%
		Solder mask	AUS308 (PSR-4000/ CA-40)	3.6293	Acrylic resin	Trade Secret	2.07%	20.00%	0.7259	0.4142%
					Barium Sulfate	7727-43-7		10.35%	0.3756	0.2143%
					3-Methoxy-3-Methyl Butyl-Acetate	103429-90-9		10.00%	0.3629	0.2071%
					Dipropylene glycol monomethyl	34590-94-8		2.85%	0.1034	0.0590%
					Talc containing no asbestiform photopolymerization	14807-96-6		0.35%	0.0127	0.0072%
					photopolymerization	Trade Secret		0.35%	0.0127	0.0072%
					Solvent naphtha	64742-94-5		0.35%	0.0127	0.0072%
					auxiliaries ; additives	Trade Secret		0.35%	0.0127	0.0072%
					SiO2 Compounds	Trade Secret		0.50%	0.0181	0.0104%
					Phthalocyanine Green G	Trade Secret		0.50%	0.0181	0.0104%
					organic pigments	Trade Secret		0.50%	0.0181	0.0104%
					Acrylic resin	Trade Secret		10.00%	0.3629	0.2071%
					Epoxy resins	Trade Secret		22.85%	0.8293	0.4732%
					organic fillers	Trade Secret		0.35%	0.0127	0.0072%
					Barium Sulfate	7727-43-7		10.35%	0.3756	0.2143%
					Dipropylene glycol monomethyl	34590-94-8		10.00%	0.3629	0.2071%
					3-Methoxy-3-Methyl Butyl-Acetate	103429-90-9		0.35%	0.0127	0.0072%
		Nickel plating	Nickel Plating	0.8524	Nickel	7440-02-0	0.49%	100.00%	0.8524	0.4864%
		Gold Plating	Gold Plating	0.2420	Gold	7440-57-5	0.14%	100.00%	0.2420	0.1381%
2	Compound	Resin	CEL-9120HF	86.6467	Epoxy Resin	Trade secret	49.44%	10.000%	8.6647	4.9439%
					Hardener	Trade secret		6.000%	5.1988	2.9663%
					Metal Hydroxide	Trade secret		1.000%	0.8665	0.4944%
					Carbon Black	1333-86-4		0.200%	0.1733	0.0989%
					Silica Oxide	60676-86-0		82.800%	71.7434	40.9352%
3	Die Adhesive	Epoxy	6202C	1.5134	Diethylene glycol monoethyl ether	112-15-2	0.86%	35.000%	0.5297	0.3022%
					Rubber modified epoxy	TS ref# 10004		35.000%	0.5297	0.3022%
					Carbamate resin	TS ref# 10063		5.000%	0.0757	0.0432%
					Bismaleimide resin	TS ref# 10084		5.000%	0.0757	0.0432%
					Others	Not disclosure		20.000%	0.3027	0.1727%
4	Solder Ball	Metal	M705	33.8781	Solder	7440-31-5	19.33%	96.50%	32.6924	18.6535%
					Silver	7440-22-4		3.00%	1.0163	0.5799%
					Copper	7440-50-8		0.50%	0.1694	0.0967%
5	Gold Wire	Metal	Au	0.2570	Gold	7440-57-5	0.15%	100.00%	0.2570	0.1466%
6	Chip	Silicon	30nm	15.7419	Silicon	7440-21-3	8.98%	99.68%	15.6918	8.9534%
					Aluminum	7429-90-5		0.15%	0.0235	0.0134%
					Tungston	7440-33-7		0.11%	0.0167	0.0095%
					Titanium	7440-32-6		0.04%	0.0066	0.0038%
					Boron	7440-42-8		0.01%	0.0009	0.0005%
					Arsenic	7440-38-2		0.00%	0.0005	0.0003%
					Phosphorous	7723-14-0		0.00%	0.0006	0.0004%
					Copper	7440-50-8		0.01%	0.0008	0.0004%
					Fluorine	7782-41-4		0.00%	0.0005	0.0003%
100.00%								175.2610	100.0000%	