



ALLIANCE MEMORY MDS REPORT

Part Number:				AS9F14G08SA-45BIN									
Part Weight:				142.19969mg									
Item	Material			Substance			Weight(mg)	Homogeneous Material Level		Product Level			
	Type	Vendor	Model	Name	Purpose	CAS No.		Percentage (%)	PPM (mg/kg)	Percentage (%)	PPM (mg/kg)		
1	Silicon Chip	-	4G Nand x8 4b	Silicon (Si)	Circuit	7440-21-3	14.72228	0.99596	995,960	10.35324%	103,532		
				Oxygen		7782-44-7	0.00030	0.00002	20	0.00021%	2		
				Boron		7440-42-8	0.05942	0.00402	4,020	0.04179%	418		
2	Substrate	LIST	SU-FBJS-06302W H R.0	Glass cloth	CCL	65997-17-3	2.85417	18.00%	180,000	2.00716%	20,072		
				Resistant Epoxy Resin	CCL	223769-10-6	0.95139	6.00%	60,000	0.66905%	6,691		
				Heat Resistant Resin	CCL	25722-66-1	0.47570	3.00%	30,000	0.33453%	3,345		
				Silica Filler	CCL	7631-86-9	1.58565	10.00%	100,000	1.11509%	11,151		
				BOEHMTE	CCL	1318-23-6	0.31713	2.00%	20,000	0.22302%	2,230		
				Copper	CCL	7440-50-8	9.67247	61.00%	610,000	6.80203%	68,020		
										100.00%	1,000,000		
				2-Benzyl-2-(dimethylamino)-4'-morpholinobutyrophenone	PSR-4000	119313-12-1	0.05672	2.50%	25,000	0.03989%	399		
				Propanol,1(or 2)-(2-methoxymethylethoxy)-	PSR-4000	34590-94-8	0.10210	4.50%	45,000	0.07180%	718		
				Solvent naphtha (petroleum), heavy arom.	PSR-4000	64742-94-5	0.05672	2.50%	25,000	0.03989%	399		
				Copper, [29H,31H phthalocyaninato(2-)-.kappa.N29,.kappa.N30,.kappa.N31,.kappa.N32]-, (SP-4-1)-	PSR-4000	147-14-8	0.01248	0.55%	5,500	0.00878%	88		
				Naphthalene	PSR-4000	91-20-3	0.01248	0.55%	5,500	0.00878%	88		
				Other components below reportable levels	PSR-4000	-	2.02839	89.40%	894,000	1.42644%	14,264		
										100.00%	1,000,000		
				Propanol, 1(or 2)-(2-methoxymethylethoxy)-	CA-40	34590-94-8	0.17017	17.50%	175,000	0.11967%	1,197		
				Epoxy compounds	CA-40	Trade secret	0.07293	7.50%	75,000	0.05129%	513		
				Other components below reportable levels	CA-40	-	0.72929	75.00%	750,000	0.51286%	5,129		
										100.00%	1,000,000		
				Copper	conductive	7440-50-8	16.26286	99.98%	999,800	11.43663%	114,366		
				Other ingredients	conductive	-	0.00325	0.02%	200	0.00229%	23		
						100.00%	1,000,000						
Nickel Metal	wire bond	7440-02-0	0.03280	100.00%	1,000,000	0.02307%	231						
Au	wire bond	7440-57-5	0.00331	100.00%	1,000,000	0.00233%	23						
3	Die Attach Material (Tape)	INNOX	IDU0B3L-20T	Epoxy	Adhesive materials for die to die,	29690-82-2	0.26434	20.00%	200,000	0.18589%	1,859		
				Acrylate copolymer	die to sub UV Cure type dicing	Trade secret	0.26434	20.00%	200,000	0.18589%	1,859		
				Hardener	tape	Trade secret	0.13217	10.00%	100,000	0.09295%	929		
				Silica		7631-86-9	0.66084	50.00%	500,000	0.46473%	4,647		
										100.00%	1,000,000		
4	Wire	LT Metal	HS-G3 0.7mil	Gold	Balance Material	7440-57-5	0.08085	80.05%	800,500	0.05686%	569		
				Silver	Enhance mechanical strength	7440-22-4	0.01919	19.00%	190,000	0.01350%	135		
				Palladium	Enhance reliability	7440-05-3	0.00095	0.94%	9,400	0.00067%	7		
				Others	-	-	0.00001	0.01%	100	0.00001%	0		
										100.00%	1,000,000		
5	Mold Compound	KCC 0.4	KTMC5900GPU (16mm x 7.0g)	Silica, vitreous	Filler	60676-86-0	62.81121	83.50%	835,000	44.17113%	441,711		
				Silicon dioxide	Filler	7631-86-9	4.13727	5.50%	55,000	2.90948%	29,095		
				4,4'-Bis(2,3-epoxypropoxy)-3,3',5,5'-tetramethyl(1,1'-biphenyl)	Resin	85954-11-6	4.13727	5.50%	55,000	2.90948%	29,095		
				Phenol polymer with 1,4-bis(methoxymethyl)benzene	Resin	26834-02-6	3.38504	4.50%	45,000	2.38048%	23,805		
				Phenol polymer with formaldehyde	Resin	9003-35-4	0.37612	0.50%	5,000	0.26450%	2,645		
				Carbon Black	Colorant	1333-86-4	0.37612	0.50%	5,000	0.26450%	2,645		
										100.00%	1,000,000		
6	Solder Ball	Duksan	mm(Sn/1.2Ag/0.5Cu/0.05Ni)	Tin	Remain	7440-31-5	15.10299	98.25%	982,500	10.62097%	106,210		
				Silver	Conductivity Improvement	7440-22-4	0.18446	1.20%	12,000	0.12972%	1,297		
				Copper	Heat resistance improvement	7440-50-8	0.07686	0.50%	5,000	0.05405%	541		
				Nickel	Thermal stability of alloy	7440-02-0	0.00769	0.05%	500	0.00541%	54		
										100.00%	1,000,000		
Total							142.19969			100.00000%	1,000,000		