ALLIANCE MEMORY MDS REPORT

Part Number :		AS4C32M16MD1A-5BCN				Package : 8.0 x 9.0 F60 FBGA		
Part Weight (mg):		115.2						
Material	**Substances**	**Type**	**Purpose**	**CAS No.**	**Element Wt (mg)**	**Wt % Of Total Unit Wt**	**Element Wt (A) (%)**	**PPM**
Silicon Chip	Silicon (Si)	512M LPDDR_x16	Circuit	-	5.950	5.16%	100.00%	51650
Mold Compound	Silica, vitreous	KTMC5900GPU	Filler	60676-86-0	50.465	43.81%	86.00%	438064
	4,4'-Bis(2,3-epoxypropoxy)-3,3',5,5'-tetramethyl(1,1'-biphenyl)		Resin	85954-11-6	1.760	1.53%	3.00%	15281
	Phenol polymer with 1,4-bis(methoxymethyl)benzene		Hardener	26834-02-6	1.760	1.53%	3.00%	15281
	Carbon Black		Colorant	1333-86-4	0.352	0.31%	0.60%	3056
	Secret			Trade secret	4.342	3.77%	7.40%	37694
Substrate	Glass cloth	SU-FBJS-06004W H Rev.0	Base meterial, Core composition (CCL)	65997-17-3	3.000	2.60%	29.97%	26042
	Copper		Base meterial, Core composition (CCL)	7440-50-8	4.910	4.26%	49.05%	42622
	Epoxy		Base meterial, Core composition (CCL)	28906-96-9	0.400	0.35%	4.00%	3472
	Heat Resistant Resin		Base meterial, Core composition (CCL)	25722-66-1	0.400	0.35%	4.00%	3472
	Silica Filler		Base meterial, Core composition (CCL)	7631-86-9	0.400	0.35%	4.00%	3472
	Resistant Epoxy Resin		Base meterial, Core composition (CCL)	223769-10-6	0.600	0.52%	5.99%	5208
	Metal Hydroxide		Base meterial, Core composition (CCL)	1318-23-6	0.300	0.26%	3.00%	2604
	Acrylate resin		Base meterial, Solder Mask composition (PSR4000-AUS308)	Trade secrets	3.000	2.60%	36.14%	26042
	Organic pigments		Base meterial, Solder Mask composition (PSR4000-AUS308)	Trade secrets	0.050	0.04%	0.60%	434
	Phthalocyanine blue		Base meterial, Solder Mask composition (PSR4000-AUS308)	Trade secrets	0.050	0.04%	0.60%	434
	Talc (containing no asbest fibers)		Base meterial, Solder Mask composition (PSR4000-AUS308)	14807-96-6	0.300	0.26%	3.61%	2604
	Barium Sulfate		Base meterial, Solder Mask composition (PSR4000-AUS308)	7727-43-7	2.100	1.82%	25.30%	18229
	Silica		Base meterial, Solder Mask composition (PSR4000-AUS308)	Trade secrets	0.050	0.04%	0.60%	434
	2-Benzyl-2dimethylamino-1-(4-morpholino-phenyl)-1-butanone		Base meterial, Solder Mask composition (PSR4000-AUS308)	119313-12-1	0.300	0.26%	3.61%	2604
	Defoamers/leveling agent etc.		Base meterial, Solder Mask composition (PSR4000-AUS308)	Trade secrets	0.300	0.26%	3.61%	2604
	Dipropyleneglycolmonomethylether		Base meterial, Solder Mask composition (PSR4000-AUS308)	34590-94-8	0.600	0.52%	7.23%	5208
	3-methoxy-3-methylbutylacetate		Base meterial, Solder Mask composition (PSR4000-AUS308)	103429-90-9	1.200	1.04%	14.46%	10417
	Heavy Aromatic Solvent naphtha		Base meterial, Solder Mask composition (PSR4000-AUS308)	64742-94-5	0.300	0.26%	3.61%	2604
	Napthalence		Base meterial, Solder Mask composition (PSR4000-AUS308)	91-20-3	0.050	0.04%	0.60%	434
	Acrylicestermonomer		Base meterial, Solder Mask composition (CA-40 AUS308)	Trade secrets	1.200	1.04%	14.20%	10417
	Epoxy resin		Base meterial, Solder Mask composition (CA-40 AUS308)	Trade secrets	3.800	3.30%	44.98%	32986
	Organic filler		Base meterial, Solder Mask composition (CA-40 AUS308)	Trade secrets	0.300	0.26%	3.55%	2604
	Barium Sulfate		Base meterial, Solder Mask composition (CA-40 AUS308)	7727-43-7	2.248	1.95%	26.61%	19514
	Dipropyleneglycolmonomethylether*)1-(2-methoxy-2-methylethoxy)-2-propanol		Base meterial, Solder Mask composition (CA-40 AUS308)	34590-94-8	0.600	0.52%	7.10%	5208
	3-methoxy-3-methylbutylacetate		Base meterial, Solder Mask composition (CA-40 AUS308)	103429-90-9	0.300	0.26%	3.55%	2604
	Nickel		Ni	7440-02-0	1.153	1.00%	100.00%	10010
	Gold Potassium Cyanide		GOLD	13967-50-5	0.288	0.25%	100.00%	2503
Die Attach Material (Tape)	Epoxy	IDU0B3L-20T	Adhesive materials for die to die, die to sub	29690-82-2	0.168	0.15%	20.00%	1458
	Acrylate copolymer		UV Cure type dicing tape	Trade secret	0.168	0.15%	20.00%	1458
	Hardener			Trade secret	0.084	0.07%	10.00%	729
	Silica			7631-86-9	0.420	0.36%	50.00%	3646
Wire	Gold	0.7 mil (Au80%,Ag19%)	Balance Material	7440-57-5	0.232	0.20%	80.05%	2015
	Silver		Enhance mechanical strength	7440-22-4	0.055	0.05%	19.00%	478
	Palladium		Enhance reliability	7440-05-3	0.003	0.00%	0.94%	24
	Others		-	-	0.000	0.00%	0.01%	0
Solder Ball	Tin	0.45mm (Sn/3Ag/0.5Cu)	Remain	7440-31-5	20.497	17.79%	96.50%	177923
	Silver		Conductivity Improvement	7440-22-4	0.637	0.55%	3.00%	5531
	Copper		Heat resistance improvement	7440-50-8	0.106	0.09%	0.50%	922
				Total	115.20	100.0%		1000000.0

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