



ALLIANCE MEMORY MDS REPORT

Part Number:		AS4C512M16D4B-62BCN						
Part Weight:		201mg						
Part Name	Subdiscrete	Subdiscrete Type	Component wt (mg)	Component (%)	Material Content (Element)	CAS #	Element wt (%)	Element wt (mg)
Bond Wire	Gold	Mixed 7	0.2412	0.12				
					GOLD	7440-57-5	99	0.238788
					palladium	7440-05-3	1	0.002412
Die	Micron	Aluminum_Copper	11.9997	5.97				
					ALUMINIUM	7429-90-5	0.16	0.01919952
					COPPER	7440-50-8	0.03	0.00359991
					SILICON	7440-21-3	99.2	11.9037024
					titanium	7440-32-6	0.026	0.003119922
					tungsten	7440-33-7	0.584	0.070078248
Die Attach	BMI/Epoxy Paste	Silica/Rubber	2.3316	1.16				
					1,1'-(methylenedi-p-phenylene)bismaleimide	13676-54-5	40	0.93264
					FORMALDEHYDE, POLYMER WITH 2-(CHLOROMETHYL)OXIRANE AND PHENOL	9003-36-5	20	0.46632
					SILICA, VITREOUS	60676-86-0	40	0.93264
Encapsulant	Epoxy Mold Compound	Green	102.912	51.2				
					4,4'-Dihydroxy-3,3',5,5'-tetramethyldiphenylmethane diglycidyl ether	93705-66-9	8	8.23296
					ALUMINIUM HYDROXIDE	21645-51-2	3	3.08736
					BENZALDEHYDE, HYDROXY-, POLYMER WITH PHENOL	106466-55-1	5	5.1456
					CARBON BLACK	1333-86-4	1	1.02912
					SILICA, VITREOUS	60676-86-0	83	85.41696
Interposer Core	BT Substrate	Green 2	23.5773	11.73				
					1,1'-(methylenedi-p-phenylene)bismaleimide	13676-54-5	11.5	2.7113895
					Cyanoic acid, (1-methylethylidene)di-4,1-phenylene ester, homopolymer	25722-66-1	8.5	2.0040705
					Formaldehyde, polymer with (chloromethyl)oxirane and 2-methylphenol	29690-82-2	9.3	2.1926889
					FORMALDEHYDE, POLYMER WITH 2-(CHLOROMETHYL)OXIRANE AND PHENOL	9003-36-5	9	2.121957
					GLASS, OXIDE, CHEMICALS	65997-17-3	53.5	12.6138555
					magnesium silicate	13776-74-4	1	0.235773
					SILICA	7631-86-9	7.2	1.6975656
Interposer SolderMask	Ink	Epoxy	7.9395	3.95				
					Oxirane, 2,2'-[[[(oxiranylmethoxy)phenyl]methylene]bis[[[(1,1-dimethylethyl)methylphenylene]oxymethylene]]bis-polychloro copper phthalocyanine	129915-35-1	99.5	7.8998025
						1328-53-6	0.5	0.0396975
Interposer Surface Finish	Surface Finish	Gold	0.0201	0.01				
					GOLD	7440-57-5	100	0.0201
Interposer Surface Finish 2	Surface Finish	Nickel	0.1608	0.08				
					NICKEL	7440-02-0	100	0.1608
Interposer Surface Finish 3	Surface Finish	Copper	3.5376	1.76				
					COPPER	7440-50-8	100	3.5376
Solder	Balls	SAC 305	48.2802	24.02				
					COPPER	7440-50-8	0.5	0.241401
					SILVER	7440-22-4	3	1.448406
					TIN	7440-31-5	96.5	46.590393
					Total Weight			201