

Materials Declaration

Package	CSP_BGA - Stacked Die
Body Size	6 x 6 mm
LeadCount	84
Option	PbFree
Ball Size	0.30 mm

Molding Compound			
Item	% of Compound	Weight (g)	PPM
SiO2 Filler	86.2	4.16 E-02	476077
Epoxy resin	6.0	2.89 E-03	33138
Phenol resin	6.0	2.89 E-03	33138
Metal Hydroxide	1.5	7.23 E-04	8294
Carbon black	0.3	1.45 E-04	1657

Laminate			
Item	% of Laminate	Weight (g)	PPM
Cu	40.0	9.04 E-03	103565
Fiber glass	31.6	7.14 E-03	81816
Epoxy Resin	25.0	5.65 E-03	64728
Nickel	3.0	9.04 E-05	1036
Au	0.4	6.78 E-04	7787

Solder Ball			
Item	% of Plating	Weight (g)	PPM
Sn	96.5	8.48 E-03	97063
Ag	3.0	2.63 E-03	3011
Cu	0.50	4.76 E-05	545

Bond Wires			
Item	% of Wire	Weight (g)	PPM
Au	99.00	1.42 E-03	16212
Pd	1.0	1.43 E-05	164

Chip			
Item	% of Chip	Weight (g)	PPM
Si	100.0	5.67 E-03	64929

Die Attach 1			
Item	% of Die Attach	Weight (g)	PPM
Silicon dioxide	42.5	1.28 E-04	1460
Diester resin	27.5	8.25 E-05	945
Functionalized este	15.0	4.50 E-05	515
Epoxy resin	7.5	2.25 E-05	258
Polymeric materia	7.5	2.25 E-05	258

Die Attach 2			
Item	% of Die Attach	Weight (g)	PPM
Proprietary filler	40.0	2.80 E-05	321
Proprietary bismaleimidi	40.0	2.80 E-05	321
Proprietary polymer	20.0	1.40 E-05	160

Die Attach 3			
Item	% of Die Attach	Weight (g)	PPM
Mixture of fused and amorphous silici	30.0	6.90 E-05	790
Bismaleimide resin	20.0	4.60 E-05	527
Di-ester resin	15.0	3.45 E-05	395
Functionalize ester	15.0	3.45 E-05	395
Epoxy resin	7.5	1.73 E-05	198
Polymeric materia	7.5	1.73 E-05	198
1,3-di-2-propenyl-2 benzene, epoxidize	5.0	1.15 E-05	132

Weight (g)	PPM
8.73 E-02	1000000

Mold Compound		
Item	PPM	Method
Pb	None Detected	USEPA Method 3052; Analysis was performed by ICP-AE!
Cd	None Detected	USEPA Method 3052; Analysis was performed by ICP-AE!
Hg	None Detected	USEPA Method 3052; Analysis was performed by ICP-AE!
Cr+6	None Detected	USEPA 7196A & USEPA 3060A
PBB	None Detected	USEPA 8081A/8270D/3540C/3550C. Analysis was performed by GC/MS
PBDE	None Detected	USEPA 8081A/8270D/3540C/3550C. Analysis was performed by GC/MS

Die Attach 1		
Item	PPM	Method
Pb	None Detected	USEPA Method 3052; Analysis was performed by ICP-AE!
Cd	None Detected	USEPA Method 3052; Analysis was performed by ICP-AE!
Hg	None Detected	USEPA Method 3052; Analysis was performed by ICP-AE!
Cr+6	None Detected	US EPA 3060A. UV-VIS
PBB	None Detected	US EPA 3540C/3550C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS
PBDE	None Detected	US EPA 3540C/3550C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS

Die Attach 2		
Item	PPM	Method
Pb	None Detected	US EPA 3050B, USEPA6010B.
Cd	None Detected	US EPA 3050B, USEPA6010B.
Hg	None Detected	US EPA 3052, USEPA 6010B.
Cr+6	None Detected	US EPA 3060A, USEPA 7196A.
PBB	None Detected	US EPA 3540C. Analysis was performed by GC/MS
PBDE	None Detected	US EPA 3540C. Analysis was performed by GC/MS

Die Attach 3		
Item	PPM	Method
Pb	None Detected	US EPA 3050B, USEPA6010B. ICP
Cd	None Detected	US EPA 3050B, USEPA6010B. ICP
Hg	None Detected	US EPA 3052, USEPA 6010B. ICP
Cr+6	None Detected	US EPA 3060A, USEPA 7196A. UV
PBB	None Detected	US EPA 3540C. Analysis was performed by GC/MS
PBDE	None Detected	US EPA 3540C. Analysis was performed by GC/MS

Laminate		
Item	PPM	Method
Pb	None Detected	EPA Method 3052; Analysis was performed by ICP-AE!
Cd	None Detected	EPA Method 3052; Analysis was performed by ICP-AE!
Hg	None Detected	EPA Method 3052; Analysis was performed by ICP-AE!
Cr+6	None Detected	EPA 3060A. UV-VIS
PBB	None Detected	Analysis was performed by GC/MS.
PBDE	None Detected	Analysis was performed by GC/MS.

Note: The information provided in this declaration are true to the best of ADI's knowledge.
ADI derived most of the information listed in this declaration from documents provided by third parties, and assumes no liability for any inaccuracy of such information.



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