Materials Declaration

Package	CSP_BGA - Stacked Die
Body Size	8 X 8 mm
LeadCount	96
Option	SnAgCu
Ball Size	0.40 mm

Molding Compound

Item	% of Compound	Weight (g)	PPM
SiO2 Filler	86.20	3.68 E-02	305221
Epoxy resin	6.00	2.56 E-03	21245
Phenol resin	6.00	2.56 E-03	21245
Metal Hydroxide	1.50	6.41 E-04	
Carbon black	0.30	1.28 E-04	1062
Subtotal		4.27 E-02	348773

Laminate

Item	% of Laminate	Weight (g)	PPM
Copper	40.0	1.61 E-02	133246
Fiber glass	31.6	1.27 E-02	105264
Epoxy Resin	25.0	1.00 E-02	83279
Nickel	3.0	1.21 E-03	9993
Gold	0.4	1.61 E-04	1332
Subtotal		4.02 E-02	333115

Solder Ball

	% of Plating	Weight (g)	PPM
Sn	96.50	2.30 E-02	190442
Ag	3.00	7.14 E-04	5920
Cu	0.50	1.19 E-04	987
Subtotal		2.38 E-02	197349

Bond Wires

	% of Wire	Weight (g)	PPM
Au	99.00	2.31 E-03	19119
Pd	1.00	2.33 E-05	193
Subtotal		2.33 E-03	19312

Chip

	% of Chip	Weight (g)	PPM
Si	100.0	1.10 E-02	91256

Die Attach 1

Item	% of Die Attach	Weight (g)	PPM
Silicon dioxide	42.50	1.74 E-04	1444
Diester resin	27.50	1.13 E-04	935
Functionalized ester	15.00	6.15 E-05	510
Epoxy resin	7.50	3.08 E-05	255
Polymeric material	7.50	3.08 E-05	255
Subtotal		4.10 E-04	3398

Die Attach 2

Item	% of Die Attach	Weight (g)	PPM
Proprietary filler	40.00	1.64 E-04	1359
Proprietary bismaleimide	40.00	1.64 E-04	1359
Proprietary polymer	20.00	8.20 E-05	680
Subtotal		4.10 E-04	3398

Die Attach 3

Item	% of Die Attach	Weight (g)	PPM
Mixture of fused and amorphous silica	30.00	1.23 E-04	1019
Bismaleimide resin	20.00	8.20 E-05	680
Di-ester resin	15.00	6.15 E-05	510
Functionalized ester	15.00	6.15 E-05	510
Epoxy resin	7.50	3.08 E-05	255
Polymeric material	7.50	3.08 E-05	255
1,3-di-2-propenyl-2 benzene, epoxidized	5.00	2.05 E-05	170
Subtotal		4.10 E-04	3398

Weight (g)	PPM
1.21 E-01	1000000

Mold Compound

Item	PPM	Method
Pb	Not Detected	USEPA Method 3052. ICP-AES
Cd	Not Detected	USEPA Method 3052. ICP-AES
Hg	Not Detected	USEPA Method 3052. ICP-AES
Cr+6	Not Detected	USEPA 3060A & 7196A
PBB	Not Detected	US EPA 8081A/8270D/3540C/3550C. GC/MS
PBDE	Not Detected	US EPA 8081A/8270D/3540C/3550C. GC/MS

Die Attach 1

Item	PPM	Method
Pb	Not Detected	EPA Method 3051A/3052. ICP-OES
Cd	Not Detected	EPA Method 3051A/3052. ICP-OES
Hg	Not Detected	EPA Method 3051A/3052. ICP-OES
Cr+6	Not Detected	EPA Method 3060A & 7196A. UV-VIS.
PBB	Not Detected	EPA Method 3540C/3550C. GC/MS
PBDE	Not Detected	EPA Method 3540C/3550C. GC/MS

Die Attach 2

Item	PPM	Method
Pb	Not Detected	EPA Method 3051A/3052. ICP-OES
Cd	Not Detected	EPA Method 3051A/3052. ICP-OES
Hg	Not Detected	EPA Method 3051A/3052. ICP-OES
Cr+6	Not Detected	EPA Method 3060A & 7196A. UV-VIS.
PBB	Not Detected	EPA Method 3540C/3550C. GC/MS
PBDE	Not Detected	EPA Method 3540C/3550C. GC/MS

Die Attach 3

Item	PPM	Method
Pb	Not Detected	US EPA 3050B. ICP-AES
Cd	Not Detected	BS EN1122:2001. ICP-AES
Hg	Not Detected	USEPA 3052. ICP-AES
Cr+6	Not Detected	US EPA 3060A & 7196A. UV-VIS
PBB	Not Detected	USEPA 3540C. Analysis was performed by GC/MS
PBDE	Not Detected	USEPA 3540C. 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 to any inaccuracy of such information.

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