



Materials Declaration

Package	BGA
Body Size	19 X 19
Ball Count	169
Option	SnAgCu
Ball Size	0.6mm

Molding Compound			
Item	% of Compound	Weight (g)	PPM
SiO2 Filler	86.2	3.73 E-01	349019
Epoxy resin	6.0	2.60 E-02	24294
Phenol Resin	6.0	2.60 E-02	24294
Metal Hydroxide	1.5	6.49 E-03	6073
Carbon Black	0.3	1.30 E-03	1215

Laminate			
Item	% of Laminate	Weight (g)	PPM
BT-Epoxy	75.0	3.42 E-01	320060
Solder Mask	21.6	9.85 E-02	92177
Copper	3.0	1.37 E-02	12802
Nickel	0.3	1.37 E-03	1280
Gold	0.1	4.56 E-04	427

Solder Ball			
	% of Solder Ball	Weight (g)	PPM
Sn	96.5	1.37 E-01	127784
Ag	3.0	4.24 E-03	3973
Cu	0.5	7.07 E-04	662

Bond Wires			
	% of Wire	Weight (g)	PPM
Au	99.99	4.23 E-03	3954

Chip			
	% of Chip	Weight (g)	PPM
Si	100.0	2.09 E-02	19540

Item	% of Die Attach	Weight (g)	PPM
Ag	70.0	9.31 E-03	8713
Diester	10.0	1.33 E-03	1245
Functionalized ester	10.0	1.33 E-03	1245
Epoxy resin	5.0	6.65 E-04	622
Polymeric resin	5.0	6.65 E-04	622

Package Totals

Weight (g)	PPM
1.07 E+00	1000000

Molding Compound		
Item	PPM	Method
Pb	None Detected	USEPA3050B, ICP-AES
Cd	None Detected	EN 1122 Method B-2001, ICP-AES
Hg	None Detected	USEPA 3052, ICP-AES
Cr+6	None Detected	USEPA 3060A & USEPA 7196A
PBB	None Detected	Analysis was performed by GC/MS
PBDE	None Detected	Analysis was performed by GC/MS

Die Attach Paste		
Item	PPM	Method
Pb	5.00	US EPA Method 3052, ICP-OES
Cd	None Detected	US EPA Method 3052, ICP-OES
Hg	None Detected	US EPA Method 3052, ICP-OES
Cr+6	None Detected	US EPA Method 3060A & 7196A, UV-VIS
PBB	None Detected	Analysis was performed by GC/MS
PBDE	None Detected	Analysis was performed by GC/MS

Laminate		
Item	PPM	Method
Pb	None Detected	US EPA Method 3052, ICP-OES
Cd	None Detected	US EPA Method 3052, ICP-OES
Hg	None Detected	US EPA Method 3052, ICP-OES
Cr+6	None Detected	US EPA Method 3060A & 7196A, 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 to any inaccuracy of such information.



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Package	BGA
Body Size	19 X 19
Ball Count	169
Option	SnPbAg
Ball Size	0.6mm

Molding Compound			
Item	% of Compound	Weight (g)	PPM
SiO2 Filler	86.2	3.73 E-01	343290
Epoxy resin	6.0	2.60 E-02	23895
Phenol Resin	6.0	2.60 E-02	23895
Metal Hydroxide	1.5	6.49 E-03	5974
Carbon Black	0.3	1.30 E-03	1195

Laminate			
Item	% of Laminate	Weight (g)	PPM
BT-Epoxy	75.0	3.42 E-01	314806
Solder Mask	21.6	9.85 E-02	90664
Copper	3.0	1.37 E-02	12592
Nickel	0.3	1.37 E-03	1259
Gold	0.1	4.56 E-04	420

Solder Ball			
	% of Solder Ball	Weight (g)	PPM
Sn	62.0	9.96 E-02	91665
Pb	36.0	5.78 E-02	53225
Ag	2.0	3.21 E-03	2957

Bond Wires			
	% of Wire	Weight (g)	PPM
Au	99.99	2.93 E-03	2701

Chip			
	% of Chip	Weight (g)	PPM
Si	100.0	2.09 E-02	19219

Die Attach			
Item	% of Die Attach	Weight (g)	PPM
Ag	70.0	9.31 E-03	8570
Diester	10.0	1.33 E-03	1224
Functionalized ester	10.0	1.33 E-03	1224
Epoxy resin	5.0	6.65 E-04	612
Polymeric resin	5.0	6.65 E-04	612

Package Totals

Weight (g)	PPM
1.09 E+00	1000000

Molding Compound		
Item	PPM	Method
Pb	Not Detected	USEPA3050B, ICP-AES
Cd	Not Detected	EN 1122 Method B/2001, ICP-AES
Hg	Not Detected	USEPA 3052, ICP-AES
Cr+6	Not Detected	USEPA 3060A & USEPA 7196A
PBB	Not Detected	Analysis was performed by GC/MS
PBDE	Not Detected	Analysis was performed by GC/MS

Die Attach Paste		
Item	PPM	Method
Pb	5.00	US EPA Method 3052, ICP-OES
Cd	Not Detected	US EPA Method 3052, ICP-OES
Hg	Not Detected	US EPA Method 3052, ICP-OES
Cr+6	Not Detected	US EPA Method 3060A & 7196A, UV-VIS
PBB	Not Detected	Analysis was performed by GC/MS
PBDE	Not Detected	Analysis was performed by GC/MS

Laminate		
Item	PPM	Method
Pb	None Detected	US EPA Method 3052, ICP-OES
Cd	None Detected	US EPA Method 3052, ICP-OES
Hg	None Detected	US EPA Method 3052, ICP-OES
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