Materials Declaration

Package	BGA
Body Size	23 X 23
Ball Count	225
Option	SnAgCu
Ball Size	0.76 mm

Molding Compound

Item	% of Compound	Weight (g)	PPM
SiO2 Filler	86.2	5.47 E-01	284608
Epoxy resin	6.0	3.80 E-02	19810
Phenol Resin	6.0	3.80 E-02	19810
Metal Hydroxide	1.5	9.51 E-03	4953
Carbon Black	0.3	1.90 E-03	991
Subtotal		6.34 E-01	330171

Laminate

Item	% of Laminate	Weight (g)	PPM
BT Resin	27.0	2.13 E-01	110786
Glass fiber	25.0	1.97 E-01	102580
Cu	18.0	1.42 E-01	73857
Ni	11.0	8.67 E-02	45135
Soldermask	11.0	8.67 E-02	45135
Au	8.0	6.30 E-02	32825
		7.88 E-01	410318

Solder Ball

	% of Solder Ball	Weight (g)	PPM
Sn	96.5	3.69 E-01	192400
Ag	3.0	1.15 E-02	5982
Cu	0.5	1.91 E-03	997
Subtotal		3.83 E-01	199379

Bond Wires

	% of Wire	Weight (g)	PPM
Au	99.99	9.52 E-03	4959

Chip

	% of Chip	Weight (g)	PPM
Si	100.0	9.02 E-02	46980

Die Attach

Item	% of Die Attach	Weight (g)	PPM
Ag	66.1	1.04 E-02	5417
Polymeric material	16.5	2.60 E-03	1355
Acrylate resin	6.2	9.75 E-04	508
Diester resin	6.2	9.75 E-04	508
Functionalized urethane resin	2.5	3.90 E-04	203
Epoxy resin	2.5	3.90 E-04	203
Subtotal		1.57 E-02	8193

Molding Compound

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 Paste

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.

Package Totals

Weight (g)	PPM
1.92 E+00	1000000

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.

ANALOG DEVICES

ADI Proprietary

Materials Declaration

Package	BGA
Body Size	23 x 23
Ball Count	225
Option	SnPbAg
Ball Size	0.76 mm

Molding Compound

Item	% of Compound	Weight (g)	PPM
Silica	93.1	7.20 E-01	369404
Epoxy Resin	5.5	4.23 E-02	21730
Antimony trioxide	1.1	8.46 E-03	4346
Carbon Black	0.3	2.54 E-03	1304
Subtotal		7.73 E-01	396783

Laminate

Item	% of Laminate	Weight (g)	PPM
Barium compounds	52.57	3.40 E-01	174622
Copper (Cu)	39.57	2.56 E-01	131440
Bismaleimide Triazine Resin	6.8	4.40 E-02	22588
Glass cloth	0.869	5.62 E-03	2887
Nickel	0.191	1.24 E-03	634
Subtotal		6.47 E-01	332171

Solder Ball

	% of Plating	Weight (g)	PPM
Sn	62.0	2.89 E-01	148299
Pb	36.0	1.68 E-01	86109
Ag	2.0	9.32 E-03	4784
Subtotal		4.66 E-01	239192

Bond Wires

	% of Wire	Weight (g)	PPM
Au	99.99	1.07 E-02	5499

Chip

	% of Chip	Weight (g)	PPM
Si	100.0	4.83 E-02	24799

Die Attach

Item	% of Die Attach	Weight (g)	PPM
Ag Filler	75.0	2.27 E-03	1167
Resin	25.0	7.58 E-04	389
Subtotal		3.03 E-03	1557

Package Totals

Weight (g)	PPM
1.95 E+00	1000000

Molding Compound

Item	PPM	Method
Pb	None Detected	EPA Method 3051A/3052. ICP-OES
Cd	None Detected	EPA Method 3051A/3052. ICP-OES
Hg	None Detected	EPA Method 3051A/3052. ICP-OES
Cr+6	None Detected	EPA Method 3060A & 7196A. UV-VIS
PBB	None Detected	EPA Method 3540C/3550C. GC/MS
PBDE	None Detected	EPA Method 3540C/3550C. GC/MS

Die Attach

Item	PPM	Method
Pb	None Detected	EPA Method 3051A/3052. ICP-OES
Cd	None Detected	EPA Method 3051A/3052. ICP-OES
Hg	None Detected	EPA Method 3051A/3052. ICP-OES
Cr+6	None Detected	EPA Method 3060A & 7196A. UV-VIS
PBB	None Detected	EPA Method 3540C/3550C. GC/MS
PBDE	None Detected	EPA Method 3540C/3550C. GC/MS

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ANALOG DEVICES