

## Materials Declaration

<b>Package</b>	CSP_BGA
<b>Body Size</b>	13 X 13
<b>Ball Count</b>	144
<b>Option</b>	96.5Sn/3Ag/0.5Cu
<b>Ball Size</b>	0.6mm

### Molding Compound

Item	% of Compound	Weight (g)	PPM
SiO2 Filler	77.0	1.32 E-01	257284
Epoxy resin	10.0	1.71 E-02	33413
Phenol Resin	10.0	1.71 E-02	33413
Metal Hydroxide	2.5	4.28E-03	8353
Carbon Black	0.5	8.56 E-04	1671

### Laminate

Item	% of Laminate	Weight (g)	PPM
BT-Epoxy	27.0	2.98E-02	58230
Glass Fiber	25.0	2.76E-02	53916
Copper	18.0	1.99E-02	38820
Solder Mask	11.0	1.22E-02	23723
Nickel	11.0	1.22E-02	23723
Gold	8.0	8.84E-03	17253

### Solder Ball

	% of Solder Ball	Weight (g)	PPM
Sn	96.5	1.16 E-01	226985
Ag	3.0	3.62 E-03	7059
Cu	0.5	6.03 E-04	1176

### Bond Wires

	% of Wire	Weight (g)	PPM
Au	99.99	2.35 E-03	4585

### Chip

	% of Chip	Weight (g)	PPM
Si	100.0	3.26 E-02	63626

### Die Attach

Item	% of Die Attach	Weight (g)	PPM
Ag	75.0	5.64E-02	110077
Diester	12.5	9.40E-03	18346
Resin	5.0	3.76E-03	7338
Functionalized ester	5.0	3.76E-03	7338
Functionalized urethane	2.5	1.88E-03	3669

### Package Totals

Weight (g)	PPM
5.12 E-01	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	Not Detected	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

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.



ADI Proprietary

8/16/06