Materials Declaration

Package	CSP_BGA
Body Size	12 x 12 mm
LeadCount	182
Option	SnPbAg
Ball Size	0.45 mm

Molding Compound

Item	% of Compound	Weight (g)	PPM
SiO2 Filler	86.2	1.36 E-01	414390
Epoxy resin	6.0	9.47 E-03	28844
Phenol Resin	6.0	9.47 E-03	28844
Metal Hydroxide	1.5	2.37 E-03	7211
Carbon Black	0.3	4.74 E-04	1442

Laminate

Item	% of Laminate	Weight (g)	PPM
BT Resin	75.0	5.61 E-02	170900
Solder mask	21.6	1.62 E-02	49219
Cu	3.0	2.25 E-03	6836
Ni	0.3	2.25 E-04	684
Au	0.1	7.48 E-05	228

Solder Ball

	% of Plating	Weight (g)	PPM
Sn	62.0	4.52 E-02	137753
Pb	36.0	2.63 E-02	79985
Ag	2.00	1.46 E-03	4444

Bond Wires

	% of Wire	Weight (g)	PPM
Au	99.00	4.28 E-03	13025

Chip

	% of Chip	Weight (g)	PPM
Si	100.0	1.62 E-02	49437

Die Attach

Item	% of Die Attach	Weight (g)	PPM
Ag Filler	70.0	1.55 E-03	4731
Diester	10.0	2.22 E-04	676
Functionalized ester	10.0	2.22 E-04	676
Epoxy resin	5.0	1.11 E-04	338
Polymeric resin	5.0	1.11 E-04	338

Weight (g)	PPM
3.28 E-01	1000000

Mold 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

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

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ADI derived most of the information listed in this declaration from documents provided by third parties, and assumes no liability tc
any inaccuracy of such information.

Materials Declaration

Package	CSP_BGA
Body Size	12 x 12 mm
LeadCount	182
Option	SnAgCu
Ball Size	0.45 mm

Molding Compound

Item	% of Compound	Weight (g)	PPM
SiO2 Filler	86.2	1.36 E-01	425648
Epoxy resin	6.0	9.47 E-03	29627
Phenol Resin	6.0	9.47 E-03	29627
Metal Hydroxide	1.5	2.37 E-03	7407
Carbon Black	0.3	4.74 E-04	1481

Laminate

Item	% of Laminate	Weight (g)	PPM
BT Resin	75.0	5.61 E-02	175543
Solder mask	21.6	1.62 E-02	50556
Cu	3.0	2.25 E-03	7022
Ni	0.3	2.25 E-04	702
Au	0.1	7.48 E-05	234

Solder Ball

	% of Plating	Weight (g)	PPM
Sn	96.5	6.20 E-02	194014
Ag	3.00	1.93 E-03	6032
Cu	0.50	3.21 E-04	1005

Bond Wires

	% of Wire	Weight (g)	PPM
Au	99.00	4.28 E-03	13379

Chip

	% of Chip	Weight (g)	PPM
Si	100.0	1.62 E-02	50780

Die Attach

Item	% of Die Attach	Weight (g)	PPM
Ag Filler	70.0	1.55 E-03	4860
Diester	10.0	2.22 E-04	694
Functionalized ester	10.0	2.22 E-04	694
Epoxy resin	5.0	1.11 E-04	347
Polymeric resin	5.0	1.11 E-04	347

Weight (g)	PPM
3.20 E-01	1000000

Mold 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

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

STS-BC-P

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