

Product / Package Information

Package	CSP BGA
Body Size (mm)	6 X 6 X 1.0
Ball Count	88
Terminal Finish	SnAgCu
Ball Size (mm)	0.30

Materials Declaration

Molding Compound

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Silica	60876-86-0	2.28 E-02	86.20	862000	33.35	333523
Thermosets	Epoxy resin	Proprietary	1.59 E-03	6.00	60000	2.32	23215
Thermosets	Phenol Resin	Proprietary	1.59 E-03	6.00	60000	2.32	23215
Other inorganic materials	Metal Hydroxide	Proprietary	3.97 E-04	1.50	15000	0.58	5804
Other inorganic materials	Carbon Black	1333-86-4	7.93 E-05	0.30	3000	0.12	1161
Subtotal	Subtotal		2.64 E-02	100.0	1000000	38.69	386917

Laminate

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Copper & its alloys	Copper Foil	7440-50-8	2.22 E-03	8.90	88950	3.25	32544
Thermoset	Epoxy resin	Proprietary	3.97 E-03	15.89	158910	5.81	58141
Other inorganic materials	Silica	Proprietary	3.39 E-03	13.55	135470	4.96	49565
Other inorganic materials	Calcium oxide	Proprietary	8.00 E-04	3.20	32000	1.17	11708
Other inorganic materials	Magnesium oxide	Proprietary	8.00 E-04	3.20	32000	1.17	11708
Other inorganic materials	Aluminum oxide	Proprietary	7.87 E-04	3.15	31480	1.15	11518
Thermoset	Novolac	Proprietary	6.24 E-04	2.496	24960	0.91	9132
Other inorganic materials	Boron oxide	Proprietary	3.97 E-04	1.59	15880	0.58	5810
Other inorganic materials	Zinc	7440-66-6	9.00 E-06	0.04	360	0.01	132
Other inorganic materials	Chromium	7440-47-3	1.00 E-06	0.004	40	0.00	15
	Laminate Core Subtotal		1.30 E-02	52.01	520050	19.03	190273
Other inorganic materials	Soldermask Acrylic Resin	Proprietary	8.76 E-04	3.50	35040	1.28	12820
Other inorganic materials	Filler	Proprietary	4.58 E-04	1.83	18320	0.67	6703
Thermoset	Epoxy resin	Proprietary	4.02 E-04	1.61	16080	0.59	5883
Other organic materials	Acrylic monomer	Proprietary	1.56 E-04	0.624	6240	0.23	2283
Other organic materials	Aromatic Carbonyl	Proprietary	7.80 E-05	0.31	3120	0.11	1142
Others	Leveling agents	Proprietary	1.20 E-05	0.05	480	0.02	176
Other inorganic materials	Amine	Proprietary	1.00 E-05	0.04	400	0.01	146
Other organic materials	Phthalocyanine Blue	Proprietary	8.00 E-06	0.03	320	0.01	117
	Soldermask Subtotal		1.98 E-03	7.93	80000	2.93	29270
Copper & its alloys	Copper	7440-50-8	9.00 E-03	36.00	359970	13.17	131704
Nickel & its alloys	Nickel	7440-02-0	1.00 E-03	4.00	40000	1.46	14635
Subtotal	Subtotal		2.50 E-02	99.9	1000020	37	365874

Solder Ball

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Tin & its alloys	Tin	7440-31-5	9.38 E-03	96.50	965000	13.73	137262
Tin & its alloys	Silver	7440-22-4	2.92 E-04	3.00	30000	0.43	4267
Tin & its alloys	Copper	7440-50-8	4.86 E-05	0.50	5000	0.07	711
Subtotal	Subtotal		9.72 E-03	100	1000000	14.22	142240

Bond Wires

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious metals	Gold	7440-57-5	6.98 E-04	99	990000	1.02	10214
Precious metals	Palladium	7440-05-3	7.05 E-06	1	10000	0.01	103
Subtotal	Subtotal		7.05 E-04	100	1000000	1.03	10317

Chip

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Doped Silicon	7440-21-3	5.88 E-03	100	1000000	8.60	86032

Die Attach

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Silicon dioxide	Proprietary	2.47 E-04	41.86	418600	0.36	3608
Other organic materials	Diester resin	Proprietary	1.51 E-04	25.58	255800	0.22	2205
Other organic materials	Functionalized ester	Proprietary	1.10 E-04	18.60	186000	0.16	1603
Thermoset	Epoxy resin	Proprietary	4.11 E-05	6.98	69800	0.06	602
Other organic materials	Polymeric material	Proprietary	4.11 E-05	6.98	69800	0.06	602
Subtotal	Subtotal		5.89 E-04	100.00	1000000	0.86	8619

Package Totals			Weight (g) 6.83 E-02			Percentage (%) 100.00	PPM 1000000
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Note: The information provided in this declaration are true to the best of ADI's knowledge.

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