



Product / Package Information

Package	CSP BGA
Body Size (mm)	12 X 12
Ball Count	44
Terminal Finish	SnAgCu
Ball Size (mm)	0.60

Environmental Information

RoHS Compliant	Yes
High Temperature Compliant	Yes
Halogen Free Compliant	Yes
REACH SVHC Compliant	Yes

Materials Declaration

Molding Compound

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Silica	60676-86-0	1.54 E-01	86.20	862000	41.63	416332
Thermosets	Epoxy resin	Proprietary	1.08 E-02	6.00	60000	2.90	28979
Thermosets	Phenol Resin	Proprietary	1.08 E-02	6.00	60000	2.90	28979
Other inorganic materials	Metal Hydroxide	Proprietary	2.69 E-03	1.50	15000	0.72	7245
Other inorganic materials	Carbon Black	1333-86-4	5.38 E-04	0.30	3000	0.14	1449
Subtotal	Subtotal		1.79 E-01	100.0	1000000	48.30	482983

Laminate

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Composite	Glass Cloth	65997-17-3	2.33 E-02	14.29	142864	6.28	62763
Other inorganic materials	Inorganic Filler	Proprietary	5.06 E-04	0.31	3106	0.14	1364
Thermoset	Epoxy	7328-97-4	1.16 E-02	7.14	71432	3.14	31381
Thermoset	Flame Resistant Epoxy Resin	Proprietary	7.59 E-03	4.66	46586	2.05	20466
Thermoset	Heat Resistant Resin	Proprietary	7.59 E-03	4.66	46586	2.05	20466
Copper & its alloys	Copper Foil	7440-50-8	3.70 E-02	22.72	227171	9.98	99800
	Laminate Core Subtotal		5.06 E-02	53.77	537745	23.62	236241
Other organic materials	Acrylate resin	Proprietary	2.76 E-03	1.70	16955	0.74	7449
Other inorganic materials	Barium Sulfate, Silica, Talc	7727-43-7 / 7440-50-8 / 14807-96-6	2.82 E-03	1.73	17288	0.76	7595
Other organic materials	3-Methoxy-3-Methyl Butyl-Acetate	Proprietary	1.55 E-03	0.95	9508	0.42	4177
Thermoset	Epoxy resin	85954-11-6	1.44 E-03	0.88	8843	0.39	3885
Other organic materials	Dipropylene glycol monomethyl ether	34590-94-8	9.86 E-04	0.61	6051	0.27	2658
Other organic materials	Acrylic monomer	Proprietary	4.23 E-04	0.26	2593	0.11	1139
Other organic materials	Aromatic Carbonyl compound	Proprietary	2.71 E-04	0.17	1662	0.07	730
Other organic materials	High Boiling Point Petroleum Solvent	Proprietary	2.60 E-04	0.16	1596	0.07	701
Others	Leveling Agents & Others	Proprietary	1.08 E-04	0.07	665	0.03	292
Other organic materials	Organic Filler	Proprietary	1.41 E-04	0.09	864	0.04	380
Other inorganic materials	Amine Compound	Proprietary	4.34 E-05	0.03	266	0.012	117
Other organic materials	Phthalocyanine Blue, Organic Pigment	Proprietary	2.17 E-05	0.01	133	0.006	58
Other organic materials	Diethylene Glycol Monoethyl Ether Acetate	Proprietary	1.08 E-05	0.01	66	0.003	29
	Soldermask Subtotal		1.08 E-02	6.65	66491	2.92	29211
Copper & its alloys	Copper	7440-50-8	4.11 E-02	25.24	252412	11.09	110889
Nickel & its alloys	Nickel	7440-02-0	2.05 E-02	12.56	125641	5.52	55196
Precious metals	Gold	7440-57-5	2.89 E-03	1.77	17710	0.78	7780
Subtotal			1.63 E-01	100.00	1000000	43.93	439317

Solder Ball

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Tin & its alloys	Tin	7440-31-5	1.58 E-02	96.50	965000	4.27	42661
Tin & its alloys	Silver	7440-22-4	4.92 E-04	3.00	30000	0.13	1326
Tin & its alloys	Copper	7440-50-8	8.20 E-05	0.50	5000	0.02	221
Subtotal			1.64 E-02	100	1000000	4.42	44208

Bond Wires

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious metals	Gold	7440-57-5	8.24 E-04	99	990000	0.22	2220
Precious metals	Palladium	7440-05-3	8.32 E-06	1	10000	0.00	22
Subtotal			8.32 E-04	100	1000000	0.22	2242

Chip

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Doped Silicon	7440-21-3	1.09 E-02	100	1000000	2.95	29478

Die Attach

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Silicon dioxide	60676-86-0	3.17 E-04	48.30	483000	0.09	855
Other organic materials	Bismaleimide monomer	TS #10049	2.05 E-04	31.25	312500	0.06	553
Other organic materials	Acrylate monomer	TS #10050	5.60 E-05	8.52	85200	0.02	151
Thermoset	Epoxy resin	TS #10042	5.60 E-05	8.52	85200	0.02	151
Other organic materials	Acrylic resin	TS #10051	2.24 E-05	3.41	34100	0.01	60
Subtotal			6.57 E-04	100.00	1000000	0.18	1771

Package Totals			Weight (g)	3.71 E-01		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. 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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