

Product / Package Information

Package	CSP BGA
Body Size (mm)	15 X 15
Ball Count	196
Terminal Finish	SnAgCu
Ball Size (mm)	0.60

Environmental Information

RoHS Compliant	Yes
High Temperature Compliant	Yes
Halogen Free Compliant	No
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	86.2	862000	27.97	279704
Thermosets	Epoxy resin	Proprietary	1.07 E-02	6.0	60000	1.95	19469
Thermosets	Phenol Resin	Proprietary	1.07 E-02	6.0	60000	1.95	19469
Other inorganic materials	Metal Hydroxide	Proprietary	2.68 E-03	1.5	15000	0.49	4867
Other inorganic materials	Carbon Black	1333-86-4	5.37 E-04	0.3	3000	0.10	973
Subtotal	Subtotal		1.79 E-01	100.0	1000000	32.45	324483

Laminate

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Glass	Glass Cloth	65997-17-3	4.38 E-02	17.39	173900	7.95	79468
Other organic materials	Core resin	Proprietary	4.54 E-02	18.03	180300	8.24	82393
Copper & its alloys	Copper Foil	7440-50-8	2.16 E-02	8.59	85900	3.93	39254
	Laminate Core Subtotal		8.93 E-02	44.01	440100	20.11	201115
Other organic materials	Soldermask acrylate resin	Proprietary	1.17 E-02	4.63	46300	2.12	21158
Other inorganic materials	Barium sulfate	7727-43-7	1.03 E-02	4.10	41000	1.87	18736
Thermoset	Epoxy resin	Proprietary	5.92 E-03	2.35	23500	1.07	10739
Other organic materials	Dipropylene glycol monomethyl ether	34590-94-8	4.36 E-03	1.73	17300	0.79	7906
Other organic materials	Solvent naphta (petroleum), Heavy arom	64742-94-5	4.18 E-03	1.66	16600	0.76	7586
Other organic materials	Diethylene glycol monoethyl ether acetate	112-15-2	3.40 E-03	1.35	13500	0.62	6169
Other organic materials	Acrylic ester monomer	Proprietary	1.71 E-03	0.68	6800	0.31	3107
Other inorganic materials	Talc	14807-96-6	1.18 E-03	0.47	4700	0.21	2148
Other organic materials	Morpholine derivative	Proprietary	1.13 E-03	0.45	4500	0.21	2056
Other organic materials	Urethane resin	Proprietary	5.80 E-04	0.23	2300	0.11	1051
Other inorganic materials	Silane compounds	Proprietary	4.28 E-04	0.17	1700	0.08	777
Other organic materials	Triazine derivatives	Proprietary	1.51 E-04	0.06	600	0.03	274
Other inorganic materials	Silica	7631-86-9	1.26 E-04	0.05	500	0.02	228
Others	Pigment Green	328-53-6	1.26 E-04	0.05	500	0.02	228
Others	Pigment Yellow	5468-75-7	2.52 E-05	0.01	100	0.00	46
	Soldermask Subtotal		4.53 E-02	17.99	179900	8.22	82210
Copper & its alloys	Copper	7440-50-8	9.07 E-02	36.00	360000	16.45	164511
Nickel & its alloys	Nickel	7440-02-0	2.52 E-03	1.00	10000	0.46	4570
Precious metals	Gold	7440-57-5	2.52 E-03	1.00	10000	0.46	4570
Subtotal	Subtotal		2.52 E-01	100.00	1000000	46	456976

Solder Ball

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Tin & its alloys	Tin	7440-31-5	9.16 E-02	96.50	965000	16.62	166185
Tin & its alloys	Silver	7440-22-4	2.85 E-03	3.00	30000	0.52	5166
Tin & its alloys	Copper	7440-50-8	4.75 E-04	0.50	5000	0.09	861
Subtotal	Subtotal		9.50 E-02	100	1000000	17.22	172212

Bond Wires

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious metals	Gold	7440-57-5	2.92 E-03	99.0	990000	0.53	5299
Precious metals	Palladium	7440-05-3	2.95 E-05	1.0	10000	0.005	54
Subtotal	Subtotal		2.95 E-03	100.0	1000000	0.54	5353

Chip

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Doped Silicon	7440-21-3	2.02 E-02	100	1000000	3.67	36693

Die Attach

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious metals	Silver	7440-22-4	1.88 E-03	79.38	793800	0.34	3400
Other organic materials	Bismaleimide monomer	TS# 10049	1.88 E-04	7.94	79400	0.03	340
Other organic materials	Acrylate monomer	TS# 10064	7.49 E-05	3.17	31700	0.01	136
Other organic materials	Epoxy resin	TS# 10042	7.49 E-05	3.17	31700	0.01	136
Other organic materials	Carbamate resin	TS# 10063	7.49 E-05	3.17	31700	0.01	136
Thermoset	Acrylic resin resin	TS# 10051	7.49 E-05	3.17	31700	0.01	136
Subtotal	Subtotal		2.36 E-03	100.00	1000000	0.43	4283

Package Totals	Weight (g)	5.51 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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