

Product / Package Information	
Package	CSP BGA
Body Size (mm)	17 X 17
Ball Count	208
Terminal Finish	SnAgCu
Ball Size	0.45 mm

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	8.47 E-03	86.2	862000	0.82	8167
Thermosets	Epoxy resin	Proprietary	5.90 E-04	6.0	60000	0.06	568
Thermosets	Phenol Resin	Proprietary	5.90 E-04	6.0	60000	0.06	568
Other inorganic materials	Metal Hydroxide	Proprietary	1.47 E-04	1.5	15000	0.01	142
Other inorganic materials	Carbon Black	1333-86-4	2.95 E-05	0.3	3000	0.00	28
Subtotal	Subtotal		9.83 E-03	100.0	1000000	0.95	9474

Laminate

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Copper & its alloys	Copper Foil	7440-50-8	8.67 E-02	9.28	92800	8.36	83588
Other inorganic materials	Glass Cloth	Proprietary	7.78 E-02	8.33	83300	7.50	75031
Thermoset	Resin	Proprietary	9.21 E-02	9.86	98600	8.88	88813
Other inorganic materials	Filler	Proprietary	9.84 E-02	10.53	105300	9.48	94848
	Laminate Core Subtotal		3.55 E-01	38.00	380000	34.23	342280
Thermoset	Soldermask Acrylate Resin	Proprietary	2.84 E-02	3.04	30400	2.74	27382
Other inorganic materials	Barium Sulfate, Silica, Talc	Proprietary	2.17 E-02	2.32	23200	2.09	20897
Other organic materials	3-Methoxy-3-Methyl Butyl-Acetate	Proprietary	1.59 E-02	1.70	17000	1.53	15313
Thermoset	Epoxy Resin	Proprietary	1.49 E-02	1.60	16000	1.44	14412
Other organic materials	Dipropylene glycol monomethyl ether	34590-94-8	1.02 E-02	1.09	10900	0.98	9818
Other inorganic materials	Barium Sulfate	7727-43-7	7.29 E-03	0.78	7800	0.70	7026
Other organic materials	Acrylic Monomer	Proprietary	4.39 E-03	0.47	4700	0.42	4233
Other organic materials	Aromatic Carbonyl Compound	Proprietary	2.80 E-03	0.30	3000	0.27	2702
Other organic materials	High Boiling Point Petroleum Solvent	Proprietary	2.71 E-03	0.29	2900	0.26	2612
Others	Levelling Agents & Others	Proprietary	1.78 E-03	0.19	1900	0.17	1711
Other organic materials	Organic Filler	Proprietary	1.49 E-03	0.16	1600	0.14	1441
Other organic materials	Amine Compound	Proprietary	4.67 E-04	0.05	500	0.05	450
Other organic materials	Phthalocyanine Green, Organic Pigment	Proprietary	1.87 E-04	0.02	200	0.02	180
	Soldermask Subtotal		1.12 E-01	12.01	120100	10.82	108178
Copper & its alloys	Copper	7440-50-8	4.45 E-01	47.59	475900	42.87	428660
Nickel & its alloys	Nickel	7440-02-0	1.87 E-02	2.00	20000	1.80	18015
Precious metals	Gold	7440-57-5	3.74 E-03	0.40	4000	0.36	3603
Subtotal	Subtotal		9.34 E-01	100.00	1000000	90	900736

Solder Ball

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Tin & its alloys	Tin	7440-31-5	7.09 E-02	96.50	965000	6.83	68348
Tin & its alloys	Silver	7440-22-4	2.20 E-03	3.00	30000	0.21	2125
Tin & its alloys	Copper	7440-50-8	3.67 E-04	0.50	5000	0.04	354
Subtotal	Subtotal		7.35 E-02	100	1000000	7.08	70827

Bond Wires

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious metals	Gold	7440-57-5	4.14 E-03	99.0	990000	0.40	3988
Precious metals	Palladium	7440-05-3	4.18 E-05	1.0	10000	0.00	40
Subtotal	Subtotal		4.18 E-03	100.0	1000000	0.40	4028

Chip

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Doped Silicon	7440-21-3	1.39 E-02	100	1000000	1.34	13373

Die Attach

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious metals	Silver	7440-22-4	1.29 E-03	79.38	793800	0.12	1239
Other organic materials	Bismaleimide monomer	TS# 10049	1.29 E-04	7.94	79400	0.01	124
Other organic materials	Acrylate monomer	TS# 10064	5.13 E-05	3.17	31700	0.00	49
Other organic materials	Epoxy resin	TS# 10042	5.13 E-05	3.17	31700	0.00	49
Other organic materials	Carbamate resin	TS# 10063	5.13 E-05	3.17	31700	0.00	49
Thermoset	Acrylic resin resin	TS# 10051	5.13 E-05	3.17	31700	0.00	49
Subtotal	Subtotal		1.62 E-03	100.00	1000000	0.16	1561

Package Totals	Weight (g)	Percentage (%)	PPM
	1.04 E+00	100.00	1000000

Note: The information provided in this declaration are true to the best of ADI's knowledge.
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