Product / Package Information

Package	CSP BGA
Body Size (mm)	9 X 9
Ball Count	100
Terminal Finish	SnAgCu
Ball Size (mm)	0.45

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	7.90 E-02	86.20	862000	41.27	412719
Thermosets	Epoxy resin	Proprietary	5.50 E-03	6.00	60000	2.87	28728
Thermosets	Phenol Resin	Proprietary	5.50 E-03	6.00	60000	2.87	28728
Other inorganic materials	Metal Hydroxide	Proprietary	1.37 E-03	1.50	15000	0.72	7182
Other inorganic materials	Carbon Black	1333-86-4	2.75 E-04	0.30	3000	0.14	1436
Subtotal	Subtotal		9.16 E-02	100.0	1000000	47.88	478793

Laminate

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Copper & its alloys	Copper Foil	7440-50-8	1.01 E-02	20.76	207600	5.26	52630
Composite	Glass Cloth	65997-17-3	1.22 E-02	25.04	250400	6.35	63481
Thermoset	Epoxy resin	7238-97-4	2.43 E-03	5.01	50100	1.27	12701
Thermoset	Bismaleimide	13676-54-5	2.43 E-03	5.01	50100	1.27	12701
Thermoset	Triazine	25722-66-1	2.43 E-03	5.01	50100	1.27	12701
Other inorganic materials	Inorganic filler	Proprietary	4.86 E-03	10.02	100200	2.54	25403
	Laminate Core Subtotal		3.44 E-02	70.85	708500	17.96	179618
Other organic materials	Modified resin	Proprietary	1.71 E-03	3.52	35200	0.89	8924
Other inorganic materials	Barium Sulfate	7727-43-7	1.74 E-03	3.59	35900	0.91	9101
Other organic materials	Aromatic hydrocarbon	Proprietary	9.61 E-04	1.98	19800	0.50	5020
Other organic materials	Diethylene Glycol Monomethyl Ether Acetate	112-15-2	6.16 E-04	1.27	12700	0.32	3220
Thermoset	Epoxy resin	85954-11-6	8.98 E-04	1.85	18500	0.47	4690
Other organic materials	Acrylic ester monomer	Proprietary	2.62 E-04	0.54	5400	0.14	1369
Other organic materials	Aromatic Carbonyl Compound	Proprietary	1.70 E-04	0.35	3500	0.09	887
Other inorganic materials	Dipropylene gylcol monomethyl ether	34590-94-8	1.60 E-04	0.33	3300	0.08	837
Other inorganic materials	Levelling Agents & Others	Proprietary	1.07 E-04	0.22	2200	0.06	558
Other organic materials	Organic Filler	Proprietary	8.73 E-05	0.18	1800	0.05	456
Other organic materials	Amine Compound	Proprietary	2.91 E-05	0.06	600	0.02	152
Other organic materials	Phthalocyanine Green	Proprietary	1.46 E-05	0.03	300	0.01	76
	Soldermask Subtotal		6.75 E-03	13.92	139200	3.53	35290
Copper & its alloys	Copper	7440-50-8	5.88 E-03	12.12	121200	3.07	30726
Nickel & its alloys	Nickel	7440-02-0	1.35 E-03	2.78	27800	0.70	7048
Precious metals	Gold	7440-57-5	1.60 E-04	0.33	3300	0.08	837
Subtotal			4.85 E-02	100.00	1000000	25.35	253519

Solder Ball

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Tin & its alloys	Tin	7440-31-5	3.41 E-02	96.50	965000	17.80	178008
Tin & its alloys	Silver	7440-22-4	1.06 E-03	3.00	30000	0.55	5534
Tin & its alloys	Copper	7440-50-8	1.77 E-04	0.50	5000	0.09	922
Subtotal			3.53 E-02	100	1000000	18.45	184464

Bond Wires

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious metals	Gold	7440-57-5	7.74 E-04	99	990000	0.40	4046
Precious metals	Palladium	7440-05-3	7.82 E-06	1	10000	0.004	41
Subtotal			7.82 E-04	100	1000000	0.41	4087

Chip

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Doped Silicon	7440-21-3	1.41 E-02	100	1000000	7.39	73894

Die Attach

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Silicon dioxide	60676-86-0	4.85 E-04	48.30	483000	0.25	2533
Other organic materials	Bismaleimide monomer	TS #10049	3.14 E-04	31.25	312500	0.16	1639
Other organic materials	Acrylate monomer	TS #10050	8.55 E-05	8.52	85200	0.04	447
Thermoset	Epoxy resin	TS #10042	8.55 E-05	8.52	85200	0.04	447
Other organic materials	Acryric resin	TS #10051	3.42 E-05	3.41	34100	0.02	179
Subtotal			1.00 E-03	100.00	1000000	0.52	5244

	Weight (g)	Percentage (%)	PPM
Package Totals	**1.91 E-01**	**100.00**	**1000000**

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.

ANALOG DEVICES

ADI Proprietary