Product / Package Information

Package	CSPBGA
Body Size (mm)	10 X 10
I/O Count	80
Terminal Finish	SnAgCu
Ball Size (mm)	0.45
MS Number	MS011784A

Environmental Compliance 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	1.75 E-01	86.20	862000	31.93	319263
Thermosets	Epoxy resin	Proprietary	1.22 E-02	6.00	60000	2.22	22222
Thermosets	Phenol Resin	Proprietary	1.22 E-02	6.00	60000	2.22	22222
Other inorganic materials	Metal Hydroxide	Proprietary	3.04 E-03	1.50	15000	0.56	5556
Other inorganic materials	Carbon Black	1333-86-4	6.08 E-04	0.30	3000	0.11	1111
Subtotal			2.03 E-01	100.0	1000000	37.04	370374

Laminate

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Glass	Glass Cloth	Proprietary	1.90 E-02	9.43	94290	3.47	34690
Other organic materials	Core resin	Proprietary	1.67 E-02	8.31	83060	3.06	30559
Copper & its alloys	Copper Foil	7440-50-8	4.52 E-02	22.45	224490	8.26	82592
Other inorganic materials	Filler	Proprietary	7.68 E-03	3.82	38160	1.40	14039
	Laminate Core Subtotal		8.85 E-02	44.00	440000	16.19	161881
Other organic materials	Soldermask acrylate resin	Proprietary	9.32 E-03	4.63	46300	1.70	17034
Other inorganic materials	Barium sulfate	7727-43-7	8.25 E-03	4.10	41000	1.51	15084
Thermoset	Epoxy resin	Proprietary	4.75 E-03	2.36	23600	0.87	8683
Other organic materials	Dipropylene glycol monomethyl ether	34590-94-8	3.48 E-03	1.73	17300	0.64	6365
Other organic materials	Solvent naphta (petroleum), Heavy arom	64742-94-5	3.34 E-03	1.66	16600	0.61	6107
Other organic materials	Diethylene glycol monoethyl ether acetate	112-15-2	2.72 E-03	1.35	13500	0.50	4967
Other organic materials	Acrylic ester monomer	Proprietary	1.37 E-03	0.68	6800	0.25	2502
Other inorganic materials	Talc	14807-96-6	9.46 E-04	0.47	4700	0.17	1729
Other organic materials	Morpholine derivative	Proprietary	9.06 E-04	0.45	4500	0.17	1656
Other organic materials	Urethane resin	Proprietary	4.63 E-04	0.23	2300	0.08	846
Other inorganic materials	Silane compounds	Proprietary	3.42 E-04	0.17	1700	0.06	625
Other organic materials	Triazine derivatives	Proprietary	1.21 E-04	0.06	600	0.02	221
Other inorganic materials	Silica	7631-86-9	1.01 E-04	0.05	500	0.02	184
Others	Pigment Green	328-53-6	1.01 E-04	0.05	500	0.02	184
Others	Pigment Yellow	5468-75-7	2.01 E-05	0.01	100	0.004	37
	Soldermask Subtotal		3.62 E-02	18.00	180000	6.62	66224
Copper & its alloys	Copper	7440-50-8	7.24 E-02	36.00	360000	13.24	132448
Nickel & its alloys	Nickel	7440-02-0	2.01 E-03	1.00	10000	0.37	3679
Precious Metals	Gold	7440-57-5	2.01 E-03	1.00	10000	0.37	3679
Subtotal			2.01 E-01	100.00	1000000	36.79	367911

Solder Ball

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Tin & its alloys	Tin	7440-31-5	8.65 E-02	96.50	965000	15.82	158168
Tin & its alloys	Silver	7440-22-4	2.69 E-03	3.00	30000	0.49	4917
Tin & its alloys	Copper	7440-50-8	4.48 E-04	0.50	5000	0.08	820
Subtotal			8.97 E-02	100.0	1000000	16.39	163904

Bond Wires

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious metals	Gold	7440-57-5	2.84 E-03	99.0	990000	0.52	5193
Precious metals	Palladium	7440-05-3	2.87 E-05	1.0	10000	0.005	52
Subtotal			2.87 E-03	100	1000000	0.52	5246

Chip

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Doped Silicon	7440-21-3	4.92 E-02	100.0	1000000	8.99	89940

Die Attach

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious metals	Silver	7440-22-4	1.14 E-03	79.38	793800	0.21	2084
Other organic materials	Bismaleimide monomer	TS# 10049	1.14 E-04	7.94	79400	0.02	208
Other organic materials	Acrylate monomer	TS# 10064	4.55 E-05	3.17	31700	0.01	83
Other organic materials	Epoxy resin	TS# 10042	4.55 E-05	3.17	31700	0.01	83
Other organic materials	Carbamate resin	TS# 10063	4.55 E-05	3.17	31700	0.01	83
Thermoset	Acrylic resin	TS# 10051	4.55 E-05	3.17	31700	0.01	83
Subtotal			1.44 E-03	100.00	1000000	0.26	2625

	Weight (g)	Percentage (%)	PPM
Package Totals	**5.47 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