Product / Package Information

Package	CSPBGA
Body Size	12 X 12
Lead Count	184
Terminal Finish	SnAgCu
Ball Size	0.45
MS Number	MS011817B

Environmental Compliance 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	1.53 E-01	86.20	862000	34.83	348268
Thermosets	Epoxy resin	Proprietary	1.06 E-02	6.00	60000	2.42	24241
Thermosets	Phenol Resin	Proprietary	1.06 E-02	6.00	60000	2.42	24241
Other inorganic materials	Metal Hydroxide	Proprietary	2.66 E-03	1.50	15000	0.61	6060
Other inorganic materials	Carbon Black	1333-86-4	5.31 E-04	0.30	3000	0.12	1212
Subtotal			1.77 E-01	100.00	1000000	40.40	404023

Laminate

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Pre-preg Filler	Proprietary	1.73 E-02	9.48	94800	3.94	39443
Thermoset	Pre-preg Resin	7328-97-4	2.59 E-02	14.22			
Composite	Pre-preg Glass Cloth	65997-17-3	1.44 E-02	7.90	79000	3.29	32869
Composite	Core Glass Cloth	65997-17-3	8.64 E-03	4.74	47400	1.97	19721
Copper & its alloys	Copper Foil	7440-50-8	2.25 E-02	12.32	123200	5.13	51259
Thermoset	Core Resin	Proprietary	6.47 E-03	3.55	35500	1.48	14770
	Core Filler	7631-86-9	5.63 E-03	3.09	30900	1.29	12856
	Laminate Core Subtotal		1.01 E-01	55.30	410800	17.09	170918
Other inorganic materials	Barium Sulfate	7727-43-7	4.36 E-03	2.39	23900	0.99	9944
Thermoset	Epoxy Resin	85954-11-6	2.13 E-03	1.17	11700	0.49	4868
Other organic materials	Dipropylene glycol monomethyl ether	34590-94-8	2.22 E-03	1.22	12200	0.51	5076
Other organic materials	Solvent naphta (petroleum), Heavy arom	64742-94-5	9.12 E-05	0.05	500	0.02	208
Other inorganic materials	Talc	14807-96-6	3.83 E-04	0.21	2100	0.09	874
Other organic materials	Morpholine Derivatives	Proprietary	3.83 E-04	0.21	2100	0.09	874
Other inorganic materials	Silica	Proprietary	9.12 E-05	0.05	500	0.02	208
	Soldermask Subtotal		9.66 E-03	5.30	53000	2.21	22051
Copper & its alloys	Copper	7440-50-8	6.95 E-02	38.09	380900	15.85	158478
Nickel & its alloys	Nickel	7440-02-0	2.22 E-03	1.22	12200	0.51	5076
Precious metals	Gold	7440-57-5	1.64 E-04	0.09	900	0.04	374
Subtotal			1.82 E-01	100.00	857800	35.69	356898

Solder Ball

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Tin & its alloys	Tin	7440-31-5	6.28 E-02	96.50	965000	14.32	143248
Tin & its alloys	Silver	7440-22-4	1.95 E-03	3.00	30000	0.45	4453
Tin & its alloys	Copper	7440-50-8	3.25 E-04	0.50	5000	0.07	742
Subtotal			6.51 E-02	100.0	1000000	14.84	148444

Bond Wires

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious metals	Gold	7440-57-5	2.83 E-03	100.0	1000000	0.65	6451

Chip

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Doped Silicon	7440-21-3	1.02 E-02	100.0	1000000	2.33	23273

Die Attach

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Silicon dioxide	60676-86-0	3.70 E-04	48.30	483000	0.08	844
Other organic materials	Bismaleimide monomer	TS #10049	2.39 E-04	31.25	312500	0.05	546
Other organic materials	Acrylate monomer	TS #10050	6.53 E-05	8.52	85200	0.01	149
Thermoset	Epoxy resin	TS #10042	6.53 E-05	8.52	85200	0.01	149
Other organic materials	Acryric resin	TS #10051	2.61 E-05	3.41	34100	0.01	60
Subtotal			7.66 E-04	100.00	1000000	0.17	1748

	Weight (g)	Percentage (%)	PPM
Package Totals	**4.38 E-01**	**94.08**	**940836**

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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