



Product / Package Information

Package	CSP BGA
Body Size (mm)	15 X 15 X 1.76
Ball Count	124
Terminal Finish	SnAgCu
Ball Size	0.45 mm
Material Set	MS012671B

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	2.53 E-01	90.5	905000	38.82	388192
Thermosets	Epoxy resin	Proprietary	8.38 E-03	3.0	30000	1.29	12868
Thermosets	Phenol Resin	Proprietary	8.38 E-03	3.0	30000	1.29	12868
Other inorganic materials	Metal Hydroxide	Proprietary	8.38 E-03	3.0	30000	1.29	12868
Other inorganic materials	Carbon Black	1333-86-4	1.40 E-03	0.5	5000	0.21	2145
Subtotal	Subtotal		2.79 E-01	100.0	1000000	42.89	428941

Laminate

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Thermoset	Cured thermosetting resin (including inorganic filler)	Trade secret	5.94 E-02	20.00	200000	9.12	91246
Glass	Continuous Filament Fiber Glass	65997-17-3	4.73 E-02	15.93	159300	7.27	72678
Copper & its alloy	Copper	7440-50-8	1.44 E-01	48.64	486400	22.19	221911
Other organic materials	Modified Epoxy Acrylate Resin	186511-06-8	1.68 E-02	5.67	56700	2.59	25868
Other organic materials	C.I pigment blue 15	147-14-8	1.78 E-04	0.06	600	0.03	274
Other inorganic materials	Silicon dioxide	7631-86-9	8.73 E-03	2.94	29400	1.34	13413
Other inorganic materials	Barium Sulfate	7727-43-7	5.94 E-05	0.02	200	0.01	91
Other organic materials	Organic yellow pigment	Trade secret	1.78 E-04	0.06	600	0.03	274
Other organic materials	Dipropylene glycol monomethyl ether	34590-94-8	1.51 E-03	0.51	5100	0.23	2327
Other organic materials	Heavy Aromatic Solvent naphtha	64742-94-5	5.08 E-03	1.71	17100	0.78	7802
Other inorganic materials	Talc	14807-96-6	7.25 E-03	2.44	24400	1.11	11132
Precious Metals	Gold	7440-57-5	4.16 E-04	0.14	1400	0.06	639
Precious Metals	Palladium	7440-05-3	4.16 E-04	0.14	1400	0.06	639
Nickel & its alloys	Nickel	7440-02-0	5.17 E-03	1.74	17400	0.79	7938
Subtotal	Subtotal		2.97 E-01	100.0	1000000	46	456231

Solder Ball

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Tin & its alloys	Tin	7440-31-5	4.22 E-02	96.50	965000	6.49	64900
Tin & its alloys	Silver	7440-22-4	1.31 E-03	3.00	30000	0.20	2018
Tin & its alloys	Copper	7440-50-8	2.19 E-04	0.50	5000	0.03	336
Subtotal	Subtotal		4.38 E-02	100	1000000	6.73	67254

Bond Wires

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious Metals	Gold	7440-57-5	1.93 E-03	99	990000	0.30	2964
Precious metals	Palladium	7440-05-3	1.95 E-05	1	10000	0.00	30
Subtotal	Subtotal		1.95 E-03	100	1000000	0.30	2994

Chip

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Doped Silicon	7440-21-3	2.53 E-02	100	1000000	3.88	38810

Die Attach 1

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Composite	Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products	68909-20-6	2.16 E-04	37.00	370000	0.03	331
Other organic materials	Bismaleimide monomer	Proprietary	1.60 E-04	27.50	275000	0.02	246
Other inorganic materials	Silicon dioxide	7631-86-9	1.02 E-04	17.50	175000	0.02	157
Other organic materials	Acrylate monomer	Proprietary	4.37 E-05	7.50	75000	0.01	67
Other organic materials	Epoxy resin	Proprietary	4.37 E-05	7.50	75000	0.01	67
Others	Additive	Proprietary	1.75 E-05	3.00	30000	0.00	27
Subtotal	Subtotal		5.83 E-04	100.00	1000000	0.09	896

Die Attach 2

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious metals	Silver	7440-22-4	2.55 E-03	80.00	800000	0.39	3923
Other organic materials	Acrylate monomer	Trade secret	2.23 E-04	7.00	70000	0.03	343
Other organic materials	A mixture of: 4-allyl-2,6-bis(2,3-epoxypropyl)phenol; 4-allyl-6-[3-[6-[3-[6-[3-(4-allyl-2,6-bis(2,3-epoxypropyl)phenoxy)-2-hydroxypropyl]methacrylate resin	2002-1-534	2.23 E-04	7.00	70000	0.03	343
Other organic materials	Methacrylate resin	Trade secret	1.92 E-04	6.00	60000	0.03	294
Subtotal	Subtotal		3.19 E-03	100.00	1000000	0.49	4903

Package Totals			Weight (g)	6.51 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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