



Product / Package Information	
Package	CSP BGA
Body Size (mm)	19 X 19
Ball Count	349
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	60876-86-0	3.83 E-01	85.60	855000	40.04	400438
Thermosets	Epoxy Resin	Proprietary	2.25 E-02	5.04	50400	2.36	23577
Thermosets	Phenol Resin	Proprietary	8.98 E-03	2.01	20100	0.94	9403
Thermosets	Phenol Novolac	9003-35-4	8.98 E-03	2.01	20100	0.94	9403
Other inorganic materials	Metal Hydroxide	Proprietary	2.25 E-02	5.04	50400	2.36	23577
Other inorganic materials	Carbon Black	1333-86-4	1.34 E-03	0.30	3000	0.14	1403
Subtotal			4.47 E-01	100.0	1000000	46.78	467801

Laminate							
Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Composite	Glass Cloth	65997-17-3	3.45 E-02	9.95	99463	3.61	36137
Other inorganic materials	Inorganic Filler/Silica Filler	Proprietary/7631-86-9	7.51 E-04	0.22	2162	0.08	786
Thermoset	Epoxy	7328-97-4	1.73 E-02	4.97	49731	1.81	18068
Thermoset	Flame Resistant Epoxy Resin	223769-10-6	1.13 E-02	3.24	32434	1.18	11784
Thermoset	Heat Resistant Resin	25722-66-1	1.13 E-02	3.24	32434	1.18	11784
Copper & its alloys	Copper Foil	7440-50-8	5.49 E-02	15.82	158158	5.75	57461
	Laminate Core Subtotal		1.30 E-01	37.44	374381	13.60	136019
Organic materials	Acrylic resin	Proprietary	6.26 E-03	1.80	18031	0.66	6551
Other inorganic materials	Barium Sulfate, Silica, Talc	Proprietary	6.38 E-03	1.84	18384	0.67	6679
Organic materials	3-Methoxy-3-Methyl Butyl-Acetate	Proprietary	3.51 E-03	1.01	10111	0.37	3674
Organic materials	Epoxy resin	Proprietary	3.26 E-03	0.94	9404	0.34	3417
Organic materials	Dipropylene Glycol Monomethyl Ether	34590-94-8	2.23 E-03	0.64	6434	0.23	2338
Organic materials	Acrylic monomer	Proprietary	9.57 E-04	0.28	2758	0.10	1002
Organic materials	Aromatic Carbonyl Compound	Proprietary	6.14 E-04	0.18	1768	0.06	642
Organic materials	High Boiling Point Petroleum Solvent	Proprietary	5.89 E-04	0.17	1697	0.06	617
Others	Leveling agents & others	Proprietary	2.45 E-04	0.07	707	0.03	257
Organic materials	Organic Filler	Proprietary	3.19 E-04	0.09	919	0.03	334
Organic materials	Amine compound	Proprietary	9.82 E-05	0.03	283	0.01	103
Organic materials	Phthalocyanine Blue, Organic Pigment	Proprietary	4.91 E-05	0.01	141	0.01	51
Organic materials	Diethylene Glycol Monoethyl Ether Acetate	112-15-2	2.45 E-05	0.01	71	0.003	26
	Soldermask Subtotal		2.45 E-02	7.07	70708	2.57	25689
Copper & its alloys	Copper	7440-50-8	1.87 E-01	53.79	537895	19.54	195427
Nickel & its alloys	Nickel	7440-02-0	5.49 E-03	1.58	15808	0.57	5743
Precious metals	Gold	7440-57-5	4.19 E-04	0.12	1207	0.04	439
Subtotal			3.47 E-01	100.00	1000000	36.33	363318

Solder Ball							
Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Tin & its alloys	Tin	7440-31-5	1.26 E-01	96.50	965000	13.14	131401
Tin & its alloys	Silver	7440-22-4	3.90 E-03	3.00	30000	0.41	4085
Tin & its alloys	Copper	7440-50-8	6.51 E-04	0.50	5000	0.07	681
Subtotal			1.30 E-01	100	1000000	13.62	136167

Bond Wires							
Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious metals	Gold	7440-57-5	5.89 E-03	99	990000	0.62	6166
Precious metals	Palladium	7440-05-3	5.95 E-05	1	10000	0.01	62
Subtotal			5.95 E-03	100	1000000	0.62	6228

Chip							
Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Doped Silicon	7440-21-3	2.25 E-02	100	1000000	2.35	23543

Die Attach							
Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious metals	Silver	7440-22-4	2.20 E-03	78.12	781200	0.23	2299
Thermoset	Trade secret Acrylic resin	TS# 10055	2.20 E-04	7.81	78100	0.02	230
Other organic materials	Bismaleimide monomer	TS# 10049	2.20 E-04	7.81	78100	0.02	230
Other organic materials	Epoxy resin	TS# 10114	8.80 E-05	3.13	31300	0.01	92
Thermoset	Acrylic resin	TS# 10051	8.80 E-05	3.13	31300	0.01	92
Subtotal			2.81 E-03	100.00	1000000	0.29	2943

Package Totals							
Weight (g)			9.55 E-01	Percentage (%)			PPM
							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.



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