

Product / Package Information

Package	CSPBGA
Body Size (mm)	15x15
Ball Count	124
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

Chip 1

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic material	Silicon	7440-21-3	0.008612	100.0000	1000000	1.6950	16950.08
			0.008612	100.0000	1000000	1.6950	16950.08

Chip 2

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic material	Silicon	7440-21-3	0.008612	100.0000	1000000	1.6950	16950.08
			0.008612	100.0000	1000000	1.6950	16950.08

Chip 3

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic material	Silicon	7440-21-3	0.015910	100.0000	1000000	3.1315	31315
			0.015910	100.0000	1000000	3.1315	31315

Substrate

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Cu Plating	Copper, metal	7440-50-8	0.038968	20.5963	205963	7.6700	76699.65
Au Plating	Gold, metal	7440-57-5	0.000182	0.0963	963	0.0358	358.4585
Ni Plating	Nickel, metal	7440-02-0	0.001401	0.7405	7405	0.2757	2757.468
Core	Cured thermosetting resin (including inorganic filler)	Trade secret	0.037539	19.8411	198411	7.3887	73887.48
	Continuous Filament Fiber Glass	Trade secret	0.037539	19.8411	198411	7.3887	73887.48
	Copper, metal	7440-57-5	0.050052	26.4548	264548	9.8517	98516.65
Solder Mask	Cured Resin	Trade secret	0.014487	7.6569	76569	2.8514	28513.89
	Copper phthalocyanine	147-14-8	0.000035	0.0186	186	0.0069	69.43318
	Organic pigment	Trade secret	0.000035	0.0186	186	0.0069	69.43318
	Silicon dioxide	7631-86-9	0.002164	1.1436	11436	0.4259	4258.568
	Barium sulfate	7727-43-7	0.002164	1.1436	11436	0.4259	4258.568
	Talc	14807-96-6	0.002164	1.1436	11436	0.4259	4258.568
	Organic filler	Trade secret	0.002164	1.1436	11436	0.4259	4258.568
Antifoamer and Leveling agent	Trade secret	0.000306	0.1616	1616	0.0602	601.7542	
Subtotal			0.189200	100.0000	1000000	37.2396	372396

Bond Wire

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious metals	Gold, metal	7440-57-5	0.002458	99.0533	990533	0.4838	4837.745
Precious metals	Palladium, metal	7440-05-3	0.000023	0.9457	9457	0.0046	46.18952
Other inorganic materials	Calcium	7440-70-2	0.000000	0.0010	10	0.0000	0.048621
Subtotal			0.002481	100.0000	1000000	0.4884	4883.983

Die Attach

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Silicon dioxide	60676-86-0	0.002137	48.3000	483000	0.4206	4206.39
Other organic materials	Bismaleimide monomer	TS #10049	0.001383	31.2500	312500	0.2722	2721.526
Other organic materials	Acrylate monomer	TS #10050	0.000377	8.5200	85200	0.0742	741.9968
Thermoset	Epoxy resin	TS #10042	0.000377	8.5200	85200	0.0742	741.9968
Other organic materials	Acrylic resin	TS #10051	0.000151	3.4100	34100	0.0297	296.9729
Subtotal			0.004425	100.0000	1000000	0.8709	8708.882

Molding Compound

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Silica, vitreous	60676-86-0	0.209585	89.1920	891920	41.2519	412518.6
Thermosets	Epoxy Resin	Proprietary	0.013561	5.7712	57712	2.6692	26692.38
Thermosets	Phenol Resin	Proprietary	0.011096	4.7219	47219	2.1839	21839.22
Other inorganic materials	Carbon Black	1333-86-4	0.000740	0.3148	3148	0.1456	1455.948
Subtotal			0.234981	100.0000	1000000	46.2506	462506.1

Solder Ball

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Tin & its alloys	Tin, metal	7440-31-5	0.042306	96.5000	965000	8.3270	83269.74
Tin & its alloys	Silver, metal	7440-22-4	0.001315	3.0000	30000	0.2589	2588.697
Tin & its alloys	Copper, metal	7440-50-8	0.000219	0.5000	5000	0.0431	431.4494
Subtotal			0.043841	100.0000	1000000	8.6290	86289.89

Package Totals			Weight (g)			Percentage (%)	PPM
			5.08E-01			100.0000	1000000

Control ID:MS013210_12292019

Note: The information provided in this declaration are true to the best of ADI's knowledge.

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