

Product / Package Information

Package	CSPBGA
Body Size (mm)	19 X 19
Lead Count	529
Terminal Finish	SnAgCu
Ball Size (mm)	0.45
MS Number	MS012454C

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		PPM
				Percentage (%)	PPM	Percentage (%)	PPM	
Other inorganic materials	Silica	60676-86-0	3.05 E-01	87.16	871795	30.83		308333
Thermosets	Epoxy Resin	Proprietary	2.69 E-02	7.69	76923	2.72		27206
Thermosets	Phenol Resin	Proprietary	1.62 E-02	4.62	46154	1.63		16324
Other inorganic materials	Carbon Black	1333-86-4	1.79 E-03	0.51	5128	0.18		1814
Subtotal			3.50 E-01	100.00	1000000	35.37		353676

Laminate

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		PPM
				Percentage (%)	PPM	Percentage (%)	PPM	
Composite	Glass Cloth	65997-17-3	7.95 E-02	23.22	232170	8.03		80288
Other inorganic materials	Inorganic Filler	Proprietary	3.18 E-02	9.28	92810	3.21		32095
Thermoset	Epoxy	7328-97-4	1.59 E-02	4.64	46410	1.60		16049
Thermoset	Flame Resistant Epoxy Resin	223769-10-6	1.59 E-02	4.64	46400	1.60		16046
Thermoset	Heat Resistant Resin	25722-66-1	1.59 E-02	4.64	46400	1.60		16046
Copper & its alloys	Copper Foil	7440-50-8	15.18 E-02	15.14	151398	5.24		52356
	Laminate Core Subtotal		2.11 E-01	61.56	615588	21.29		212879
Organic materials	Acrylic resin	Proprietary	7.60 E-03	2.22	22200	0.77		7677
Organic materials	3-Methoxy-3-Methyl Butyl-Acetate	Proprietary	4.24 E-03	1.24	12400	0.43		4288
Organic materials	Epoxy resin	Proprietary	4.00 E-03	1.17	11700	0.40		4046
Other inorganic materials	Barium Sulfate	7727-43-7	3.87 E-03	1.13	11300	0.39		3908
Organic materials	Dipropylene Glycol Monomethyl Ether	34590-94-8	2.74 E-03	0.80	8000	0.28		2767
Other inorganic materials	Silica	Proprietary	1.92 E-03	0.56	5600	0.19		1937
Other inorganic materials	Talc	Proprietary	1.92 E-03	0.56	5600	0.19		1937
Organic materials	Acrylic monomer	Proprietary	1.16 E-03	0.34	3400	0.12		1176
Organic materials	Aromatic Carbonyl Compound	Proprietary	0.22 E-04	0.22	2200	0.08		761
Organic materials	High Boiling Point Petroleum Solvent	Proprietary	7.19 E-04	0.21	2100	0.07		726
Others	Levelling agents & others	Proprietary	4.79 E-04	0.14	1400	0.05		484
Organic materials	Organic Filler	Proprietary	3.76 E-04	0.11	1100	0.04		380
Organic materials	Amine compound	Proprietary	1.37 E-04	0.04	400	0.01		138
Organic materials	Phthalocyanine Green	Proprietary	4.84 E-05	0.01	141	0.00		49
Organic materials	Diethylene Glycol Monoethyl Ether Acetate	112-15-2	2.42 E-05	0.01	71	0.002		24
	Soldermask Subtotal		3.00 E-02	8.76	87612	3.03		30297
Copper & its alloys	Copper	7440-50-8	9.45 E-02	27.60	276000	9.54		95445
Nickel & its alloys	Nickel	7440-02-0	6.37 E-03	1.86	18600	0.64		6432
Precious metals	Gold	7440-57-5	7.53 E-04	0.22	2200	0.08		761
Subtotal			3.42 E-01	100.00	1000000	34.58		345814

Solder Ball

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		PPM
				Percentage (%)	PPM	Percentage (%)	PPM	
Tin & its alloys	Tin	7440-31-5	1.80 E-01	96.50	965000	18.24		182379
Tin & its alloys	Silver	7440-22-4	5.61 E-03	3.00	30000	0.57		5670
Tin & its alloys	Copper	7440-50-8	9.35 E-04	0.50	5000	0.09		945
Subtotal			1.87 E-01	100.0	1000000	18.90		188994

Bond Wires

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		PPM
				Percentage (%)	PPM	Percentage (%)	PPM	
Precious metals	Gold	7440-57-5	7.64 E-03	99.00	990000	0.77		7725
Precious metals	Palladium	7440-05-3	7.72 E-05	1.00	10000	0.008		78
Subtotal			7.72 E-03	100.0	1000000	0.78		7803

Chip

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		PPM
				Percentage (%)	PPM	Percentage (%)	PPM	
Other inorganic materials	Doped Silicon	7440-21-3	3.56 E-02	100.0	1000000	3.60		35967

Die Attach

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		PPM
				Percentage (%)	PPM	Percentage (%)	PPM	
Precious metals	Silver	7440-22-4	5.24 E-02	78.12	781200	5.29		52924
Thermoset	Trade secret Acrylic resin	TS# 10055	5.24 E-03	7.81	78100	0.53		5291
Other organic materials	Bismaleimide monomer	TS# 10049	5.24 E-03	7.81	78100	0.53		5291
Other organic materials	Epoxy resin	TS# 10114	2.10 E-03	3.13	31300	0.21		2120
Thermoset	Acrylic resin	TS# 10051	2.10 E-03	3.13	31300	0.21		2120
Subtotal			6.70 E-02	100.00	1000000	6.77		67747

Package Totals	Weight (g)	Percentage (%)	PPM
	9.90 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.



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