



Product / Package Information	
Package	FCBGA
Body Size (mm)	14X14
Ball Count	289
Terminal Finish	SnAgCu
Ball Size (mm)	0.45
MS Number	MS011252B

Environmental Information	
RoHS Compliant	Yes
High Temperature Compliant	NA
Halogen Free Compliant	Yes
REACH SVHC Compliant	NA

Materials Declaration

Underfill								
Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		
				Percentage (%)	PPM	Percentage (%)	PPM	
Other organic materials	p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	6.67 E-03	66.00	660000	1.18		11777
Thermosets	Phenolic Polymer Resin, Epikote 155	9003-36-5	1.01 E-03	10.00	100000	0.18		1784
Thermosets	4,4'-Isopropylidenediphenol-1-chloro-2,3-epoxypropane c	25068-38-6	1.01 E-03	10.00	100000	0.18		1784
Other organic materials	Amine Type Hardener	Proprietary	8.08 E-04	8.00	80000	0.14		1428
Other inorganic materials	Carbon Black	1333-86-4	2.53 E-04	2.50	25000	0.04		446
Other inorganic materials	Silica, vitreous	60676-86-0	2.53 E-04	2.50	25000	0.04		446
Others	Additives	Proprietary	1.01 E-04	1.00	10000	0.02		178
Subtotal			1.01 E-02	100.0	1000000	1.78		17845

Laminate								
Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		
				Percentage (%)	PPM	Percentage (%)	PPM	
Other organic materials	Acrylate resin	Trade secret	1.20 E-02	3.00	30000	2.12		21201
Other organic materials	Acrylate monomer	Trade secret	2.00 E-03	0.50	5000	0.35		3534
Thermoset	Epoxy resin	Trade secret	2.00 E-03	0.50	5000	0.35		3534
Thermoset	Epoxy resin (MW ≤ 700)	Trade secret	4.00 E-03	1.00	10000	0.71		7067
Other organic materials	Copper phthalocyanine	147-14-8	4.00 E-05	0.01	50000	3.53		35336
Other organic materials	Organic pigment	Trade secret	4.00 E-05	0.01	100,1201012	0.01		71
Other inorganic materials	Barium sulfate	7727-43-7	4.08 E-03	1.02	10200	0.72		7208
Other inorganic materials	Talc	14807-96-6	1.16 E-03	0.29	2900	0.20		2049
Other inorganic materials	Silica, amorphous	Trade secret	3.33 E-04	0.08	832,7556072	0.06		589
Other organic materials	Amine compounds	Trade secret	2.26 E-04	0.06	565.5	0.04		400
Other organic materials	Phosphin oxide derivative	Trade secret	1.20 E-03	0.30	3000	0.21		2120
Other organic materials	Antifoamer & Leveling agent	Trade secret	1.99 E-04	0.05	497,5203542	0.04		352
	Soldermask Subtotal		2.73 E-02	6.82	68196,01616	4.82		48195
Composite	Fibrous-glass-wool	65997-17-3	8.67 E-02	21.67	216700	15.31		153145
Copper and its alloys	Copper, metal	7440-50-8	1.67 E-02	4.17	41693,39988	2.95		29465
Thermoset	Phenol polymer with ar, ar'-bis(methoxymethyl)-1,1'-biphe	223769-10-6	2.80 E-03	0.70	7000	0.49		4947
Other organic materials	Triazine	25722-66-1	2.40 E-03	0.60	6000	0.42		4240
Other inorganic materials	Silicon dioxide	7631-86-9	5.25 E-03	1.31	13133,41813	0.93		9282
Others	Inorganic Filler	Trade Secret	3.88 E-03	0.97	9702,280334	0.69		6857
Thermoset	Thermosetting Resin	Trade Secret	1.14 E-01	28.44	284400	20.10		200989
	Laminate Core Subtotal		2.31 E-01	57.86	578629,0983	40.89		408925
Copper Plating	Copper, metal	7440-50-8	1.41 E-01	35.30	353000	24.95		249470
Subtotal			4.00 E-01	100.0	1000000	71		706714

Solder Ball								
Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		
				Percentage (%)	PPM	Percentage (%)	PPM	
Tin & its alloys	Tin	7440-31-5	9.86 E-02	96.50	965000	17.42		174206
Tin & its alloys	Silver	7440-22-4	3.07 E-03	3.00	30000	0.54		5416
Tin & its alloys	Copper	7440-50-8	5.11 E-04	0.50	5000	0.09		903
Subtotal			1.02 E-01	100	1000000	18.05		180524

Chip								
Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		
				Percentage (%)	PPM	Percentage (%)	PPM	
Other inorganic materials	Doped Silicon	7440-21-3	5.38 E-02	100	1000000	9.50		95012

Package Totals			Weight (g)	Percentage (%)	PPM
			5.66 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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