

**Product / Package Information**

Package	LGA_CAV
Body Size (mm)	4.5 X 5.8 X 1.2
I/O Count	18
Terminal Finish	Gold
MS Number	MS011753B

**Environmental Information**

RoHS Compliant	Yes - with exemption
High Temperature Compliant	Yes
Halogen Free Compliant	Yes
REACH SVHC Compliant	Yes

**Materials Declaration**

**Lid Shield**

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		
				Percentage (%)	PPM	Percentage (%)	PPM	
Stainless steel	Iron	7439-89-6	1.60E-02	67.89	678900	27.78		277782
Stainless steel	Chromium	7440-47-3	4.48E-03	19.00	190000	7.77		77741
Stainless steel	Nickel	7440-02-0	2.36E-03	9.98	99800	4.08		40835
Stainless steel	Manganese	7439-96-5	4.48E-04	1.90	19000	0.78		7774
Stainless steel	Silicon	7440-21-3	2.24E-04	0.95	9500	0.39		3887
Stainless steel	Carbon	7440-44-0	1.89E-05	0.08	800	0.03		327
Stainless steel	Phosphorus	7723-14-0	9.44E-06	0.04	400	0.02		164
Stainless steel	Sulfur	7704-34-9	7.08E-06	0.03	300	0.01		123
Plating	Nickel	7440-02-0	3.07E-05	0.13	1300	0.05		532
Subtotal			2.36 E-02	100.00	1000000	40.92		409164

**Laminate**

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		
				Percentage (%)	PPM	Percentage (%)	PPM	
Composite	Continuous Filament Fiber Glass	65997-17-3	3.51 E-03	45.00	450000	6.09		60933
Composite	Organic Resin	105391-33-1 / 1156-51-0/ 36-5	2.15 E-03	27.50	275000	3.72		37237
Composite	Inorganic Filler	21645-51-2	2.15 E-03	27.50	275000	3.72		37237
	Laminate Core Subtotal		7.81 E-03	100.00	1000000	13.54		135406
Other organic materials	Cured resin	Proprietary	1.16 E-03	61.60	616000	2.01		20068
Other inorganic materials	Barium sulfate	7727-43-7	5.84 E-04	31.10	311000	1.01		10131
Other inorganic materials	Talc	14807-96-6	6.76 E-05	3.6	36000	0.12		1173
Others	Antifoamer and levelling agent	Proprietary	2.44 E-05	1.30	13000	0.04		424
Other organic materials	Organic Filler	Proprietary	2.25 E-05	1.2	12000	0.04		391
Other inorganic materials	Silica	7631-86-9	1.69 E-05	0.9	9000	0.03		293
Other organic materials	Phthalocyanine blue	147-14-8	3.76 E-06	0.2	2000	0.01		65
Other organic materials	Organic pigment	Proprietary	1.88 E-06	0.1	1000	0.003		33
	Soldermask Subtotal		1.88 E-03	100.00	384000	3.26		32577
Copper & its alloys	Copper foil	7440-50-8	9.42 E-03	100	1000000	16.33		163319
Nickel & its alloys	Nickel	7440-02-0	2.32 E-03	82.18	821800	4.03		40265
Precious metals	Gold	7440-57-5	5.04 E-04	17.82	178200	0.87		8731
	Plating Subtotal		2.83 E-03	100.000	1000000			
Subtotal			2.19 E-02			38.03		380298

**Cap Seal**

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		
				Percentage (%)	PPM	Percentage (%)	PPM	
Glass	Lead borosilicate glass	65997-17-3	7.74 E-04	87.50	875000	1.34		13418
Glass	Aluminosilicate glass	65997-17-3	1.11 E-04	12.50	125000	0.19		1917
Subtotal			8.85 E-04	100.0	1000000	1.53		15335

**Bond Wires**

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		
				Percentage (%)	PPM	Percentage (%)	PPM	
Precious metals	Gold	7440-57-5	1.33 E-04	99.0	990000	0.23		2300
Precious metals	Palladium	7440-05-3	1.34 E-06	1.0	10000	0.00		23
Subtotal			1.34 E-04	100.0	1000000	0.23		2323

**Chip**

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		
				Percentage (%)	PPM	Percentage (%)	PPM	
Other inorganic materials	Doped Silicon	7440-21-3	9.00 E-03	100.0	1000000	15.60		156037

**Die Attach**

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		
				Percentage (%)	PPM	Percentage (%)	PPM	
Other inorganic materials	Siloxanes and silicones, di-Me, vinyl group-terminated	7440-22-4	4.35 E-04	45.00	450000	0.75		7544
Other inorganic materials	Treated silica	Proprietary	1.93 E-04	20.00	200000	0.34		3353
Other inorganic materials	Vitreous silica	60676-86-0	1.93 E-04	20.00	200000	0.34		3353
Other inorganic materials	Amorphous silica	67762-90-7	7.25 E-05	7.50	75000	0.13		1257
Other inorganic materials	Dimethyl,methyl hydrogen siloxane	68037-59-2	7.25 E-05	7.50	75000	0.13		1257
Subtotal			9.67 E-04	100.00	1000000	1.68		16765

**Die Coat**

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		
				Percentage (%)	PPM	Percentage (%)	PPM	
Other inorganic materials	Siloxanes and Silicones, de-Me, mono(vinyl group)-	68952-00-1	8.71 E-04	98.75	987500	1.51		15101
Other organic materials	Organic silicon compounds	Proprietary	8.82 E-06	1.00	10000	0.02		153
Others	Miscellaneous substances	Proprietary	2.21 E-06	0.25	2500	0.004		38
Subtotal			8.82 E-04	100.00	1000000	1.53		15292

**Lid Shield Attach**

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		
				Percentage (%)	PPM	Percentage (%)	PPM	
Precious metals	Silver	7440-22-4	2.15 E-04	78.00	780000	0.37		3732
Other organic materials	Bisphenol A-Epichlorohydrin Resin	25068-38-6	1.52 E-05	5.50	55000	0.03		263
Other organic materials	Formaldehyde polymer with (chloromethyl)oxirane and phenol	9003-36-5	1.52 E-05	5.50	55000	0.03		263
Other organic materials	Neodecanoic acid 2,3-epoxypropyl ester	26761-45-5	1.52 E-05	5.50	55000	0.03		263
Other organic materials	8-Quinololinol	148-24-3	1.52 E-05	5.50	55000	0.03		263
Subtotal			2.76 E-04	100.00	1000000	0.48		4785

Package Totals	Weight (g)	Percentage (%)	PPM
	5.77 E-02	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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