

**Product / Package Information**

Package	Flatpack
Body Size	
Lead Count	16
Terminal Finish	Au
MS Number	MS012043E

**Environmental Compliance Information**

RoHS Compliant	Yes
High Temperature Compliant	N/A
Halogen Free Compliant	Yes
REACH SVHC Compliant	Yes

**Materials Declaration**

**LID Shield Material**

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other Ferrous alloys	Kovar		3.05E-01	92.00	920000	52.27	522727
Nickel & its alloys	Nickel	7440-02-0	1.32E-02	4.00	40000	2.27	22727
Precious metals	Gold	7440-57-5	1.32E-02	4.00	40000	2.27	22727
Subtotal			3.31E-01	100.00	1000000	56.82	568182

**Substrate Material**

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
<b>Ceramics</b>							
Ceramics	Aluminum oxide	1344-28-1	1.04 E-01	90.49	904853	17.79	177900
Ceramics	Chromium oxide	1308-38-9	4.47 E-03	3.90	38960	0.77	7660
Ceramics	Silicon Dioxide	14808-60-7	4.02 E-03	3.50	35044	0.69	6890
Ceramics	Titanium dioxide	13463-67-7	1.14 E-03	1.00	9985	0.20	1963
Ceramics	Magnesium oxide	1309-48-4	6.96 E-04	0.61	6069	0.12	1193
Ceramics	Calcium oxide	1305-78-8	5.83 E-04	0.51	5090	0.10	1001
Subtotal			1.15 E-01	100.00	1000000	19.66	196607
<b>Metallization</b>							
Other inorganic materials	Tungsten	7440-33-7	1.30 E-02	100.00	1000000	2.23	22286
Subtotal							
<b>Leadframe</b>							
Iron & its alloys	Iron	7439-89-6	4.21 E-02	54.0	540121	7.23	72286
Iron & its alloys	Nickel	7440-02-0	2.26 E-02	29.0	289905	3.88	38799
Iron & its alloys	Cobalt	7440-48-4	1.33 E-02	17.0	169974	2.27	22748
Subtotal			7.80 E-02	100.00	1000000	13.38	133833
<b>Brazing</b>							
Precious metals	Silver	7440-22-4	2.85 E-03	72.16	721591	0.49	4888
Copper & its alloys	Copper	7440-50-8	1.10 E-03	27.84	278409	0.19	1886
Subtotal			3.95 E-03	100.00	1000000	0.68	6774
<b>Nickel Plating</b>							
Nickel & its alloys	Nickel	7440-02-0	6.06 E-04	99.57	995685	0.10	1039
Nickel & its alloys	Boron	7440-42-8	2.24 E-06	0.37	3688	0.00038	4
Nickel & its alloys	Bismuth	7440-69-9	3.81 E-07	0.06	627	0.00007	0.7
Subtotal			6.09 E-04	100.00	1000000	0.10	1044
<b>Nickel Plating</b>							
Nickel & its alloys	Nickel	7440-02-0	1.65 E-03	34.00	340000	0.28	2827
Other inorganic materials	Gold	7440-57-5	3.20 E-03	66.00	660000	0.55	5488
Subtotal			4.85 E-03	100.00	1000000	0.83	8315
Subtotal			2.15 E-01			36.89	368860

**Lid Shield Attach Material**

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious metals	Gold	7440-57-5	1.85 E-02	80.00	800000	3.17	31712
Tin & its alloys	Tin	7440-31-5	4.62 E-03	20.00	200000	0.79	7928
Subtotal			2.31E-02	100.00	1000000	3.96	39641

**External Leadframe Plating**

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious metals	Gold	7440-57-5	9.36 E-03	100.0	1000000	1.61	16051

**Bond Wires**

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Aluminum	7429-90-5	3.85 E-04	100.0	1000000	0.07	661

**Chip**

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Doped Silicon	7440-21-3	3.47 E-03	100.0	1000000	0.59	5946

**Die Attach**

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious metals	Silver	7440-22-4	3.08 E-04	80.00	800000	0.05	529
Polymer	Cyanate ester resin	Proprietary	7.70 E-05	20.00	200000	0.01	132
Subtotal			3.85 E-04	100.00	1000000	0.07	661

<b>Package Totals</b>			<b>Weight (g)</b> 5.83 E-01			<b>Percentage (%)</b> 100.00	<b>PPM</b> 1000000
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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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