Manufacturer Information

Company:	Azoteq(Pty) Ltd 109 Main Road Paarl Western Cape Republic of South Africa

Authorised Representative

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Product Information

Product:	IQS143 z MSR
Package type:	MSOP/10LD
Manufacturing site:	Anst
Weight:	27.09
Unit:	mg

Note: 'z' in the product description refers to a user configuration option

Manufacturing Process Information

Terminal Plating:	Refer to table below
J-STD MSL Rating:	1
Peak Process Body Temp:	260 °C
Max Time at Peak Temp:	25 sec
Number of Reflow:	3

REACH Compliance Declaration

Azoteq is aware of, and agrees with, the purpose of REACH which is to ensure a high level of protection of human health and the environment. Azoteq is compliant with all applicable requirements of REACH and provides information regarding the chemical composition of our product(s) in this document.

Product manufacturers or importers into Europe are obligated under Article 33 of REACH to inform recipients of any articles that contain chemicals on the Substances of Very High Concern (SVHC) candidate list above 0.1% concentration (by weight per article). The product(s) manufactured and marketed by Azoteq mentioned above do not contain substances on the REACH 84 SVHC candidate list in concentrations greater than 0.1% by weight per article as indicated by the REACH substance list provided below.

Azoteq is an article producer (semiconductor devices) and does not manufacture in Europe. Azoteq is not required to pre-register with REACH

Note: Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) that entered into force on June, 2007 applies to this declaration.

The full materials composition information follows:

Homogenious material composition for part: IQS143 z MSR based on package: MSOP/10LD with Die: AZQ145							
Composition Part	**Material name**	**Material (weight)**	**Material % (weight)**	**Element name composition**	**CAS No.**	**Element % (weight)**	**Element (weight)**
Die	AZQ145	1.74	6.43%	Si Die	7440-21-3	100.00%	1.74
Epoxy		0.04	0.15%	Copper(II) oxide	1317-38-0	5.00%	0.00
				Epoxy resin, epichlorohydrin-dimer fatty acid	68475-94-5	5.00%	0.00
				Silver	7440-22-4	64.10%	0.03
				Epichlorohydrin-formaldehyde-phenol copolymer	9003-36-5	5.00%	0.00
				Poly(oxypropylene)diamine	9046-10-0	5.00%	0.00
				Butyrolactone, gamma-	96-48-0	5.00%	0.00
				Organosilane (Trade Secret - 10001)	TS ref# 10001	5.00%	0.00
				Epoxy resin modifier (Trade Secret - 10038)	TS ref# 10038	0.90%	0.00
				2,6-Diglycidyl phenyl allyl ether oligomer	UNASSIGNED	5.00%	0.00
Leadframe	MSOP 10	8.32	30.70%	Mg	7439-95-4	0.10%	0.01
				Ni	7440-02-0	2.21%	0.18
				Si	7440-21-3	0.65%	0.05
				Ag	7440-22-4	1.29%	0.11
				Cu	7440-50-8	95.75%	7.96
Mold Compound		16.50	60.91%	Carbon Black	1333-86-4	1.00%	0.17
				Epoxy Resin B	29690-82-2	4.00%	0.66
				Silica(Amorphous)	60676-86-0	81.00%	13.37
				Epoxy Resin A	Trade secret A	10.00%	1.65
				Phenol Resin	Trade secret B	4.00%	0.66
Plating	Tin	0.35	1.29%	Sn	7440-31-5	99.99%	0.35
				Other	N/A	0.01%	0.00
Wire	Gold	0.14	0.51%	Au	7440-57-5	99.99%	0.14
				Other	N/A	0.01%	0.00

REACH SVHC Chemical Substance List for: IQS143 z MSR				
Item	**Substance Name**	**CAS Number**	**Weight of substance**	**w/w in component (%)**
1	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	Not Used	
2	N,N-dimethylacetamide	127-19-5	Not Used	
3	Phenolphthalein	28376	Not Used	
4	Lead diazide, Lead azide	13424-46-9	Not Used	
5	Lead dipicrate	6477-64-1	Not Used	
6	Calcium arsenate	7778-44-1	Not Used	
7	1,2-dichloroethane	107-06-2	Not Used	
8	Dichromium tris(chromate)	24613-89-6	Not Used	
9	2-Methoxyaniline; o-Anisidine	90-04-0	Not Used	
10	Pentazinc chromate octahydroxide	49663-84-5	Not Used	

11	Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (Âµm) c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight		Not Used	
12	Arsenic acid	7778-39-4	Not Used	
13	Potassium hydroxyoctaoxodizincatedichromate	11103-86-9	Not Used	
14	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	Not Used	
15	Lead styphnate	15245-44-0	Not Used	
16	Trilead diarsenate	3687-31-8	Not Used	
17	Bis(2-methoxyethyl) phthalate	117-82-8	Not Used	
18	Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number ...	Index NO.（650-017-00-8*）	Not Used	
19	Bis(2-methoxyethyl) ether	111-96-6	Not Used	
20	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	Not Used	
21	Cobalt dichloride	7646-79-9	Not Used	
22	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	Not Used	
23	Strontium chromate	2151068	Not Used	
24	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	Not Used	
25	1-Methyl-2-pyrrolidone	872-50-4	Not Used	
26	1,2,3-Trichloropropane	96-18-4	Not Used	
27	2-Ethoxyethyl acetate	111-15-9	Not Used	
28	Hydrazine	302-01-2	Not Used	
28a		7803-57-8	Not Used	
29	Cobalt(II) diacetate	71-48-7	Not Used	
30	Cobalt(II) sulphate	10124-43-3	Not Used	
31	2-Ethoxyethanol	110-80-5	Not Used	
32	2-Methoxyethanol	109-86-4	Not Used	
33	Chromium trioxide	1333-82-0	Not Used	

34	Acids generated from chromium trioxide and their oligomers. Group containing: Chromic acid, Dichromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid	7738-94-5	Not Used	
34a		13530-68-2	Not Used	
35	Cobalt(II) carbonate	513-79-1	Not Used	
36	Cobalt(II) dinitrate	10141-05-6	Not Used	
37	Trichloroethylene	28861	Not Used	
38	Potassium dichromate	7778-50-9	Not Used	
39	Tetraboron disodium heptaoxide, hydrate	12267-73-1	Not Used	
40	Ammonium dichromate	2151163	Not Used	
41	Boric acid	10043-35-3	Not Used	
41a		11113-50-1	Not Used	
42	Sodium chromate	2146108	Not Used	
43	Disodium tetraborate, anhydrous	1303-96-4	Not Used	
43a		1330-43-4	Not Used	
43b		12179-04-3	Not Used	
44	Potassium chromate	7789-00-6	Not Used	
45	Acrylamide	29007	Not Used	
46	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	Not Used	
47	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8	Not Used	
48	Anthracene oil	90640-80-5	Not Used	
49	2,4-Dinitrotoluene	121-14-2	Not Used	
50	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	Not Used	
51	Anthracene oil, anthracene-low	90640-82-7	Not Used	
52	Tris(2-chloroethyl)phosphate	115-96-8	Not Used	
53	Diisobutyl phthalate	84-69-5	Not Used	
54	Lead chromate	7758-97-6	Not Used	
55	Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3...	Extracted from Index no.: 650-017-00-8	Not Used	
56	Anthracene oil, anthracene paste	90640-81-6	Not Used	

57	Zirconia Aluminosilicate Refractory Ceramic Fibresare fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.2 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the two following conditions:a) Al2O3, SiO2 and ZrO2 are present within the following concentration ranges:Al2O3: 35 â€“ 36 % w/w, and SiO2: 47.5 â€“ 50 % w/w, and ZrO2: 15 - 17 % w/w,b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (Âµm).	Extracted from Index no. 650-017-00-8	Not Used	
58	Pitch, coal tar, high temp.	65996-93-2	Not Used	
59	Anthracene oil, anthracene paste,distn. lights	91995-17-4	Not Used	
60	Lead hydrogen arsenate	7784-40-9	Not Used	
61	Benzyl butyl phthalate (BBP)	85-68-7	Not Used	
62	Bis (2-ethylhexyl)phthalate (DEHP)	117-81-7	Not Used	
63	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	Not Used	
64	Bis(tributyltin)oxide (TBTO)	56-35-9	Not Used	
65	Diarsenic trioxide	1327-53-3	Not Used	
66	Sodium dichromate	7789-12-0	Not Used	
66a		10588-01-9	Not Used	
67	Triethyl arsenate	15606-95-8	Not Used	
68	Diarsenic pentaoxide	1303-28-2	Not Used	
69	Dibutyl phthalate (DBP)	84-74-2	Not Used	
70	4,4'- Diaminodiphenylmethane (MDA)	101-77-9	Not Used	
71	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	Not Used	

72	Anthracene	120-12-7	Not Used	
73	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	25637-99-4	Not Used	
73a		3194-55-6	Not Used	
73b		134237-50-6	Not Used	
73c		134237-51-7	Not Used	
73d		134237-52-8	Not Used	
74	Î±,Î±-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [with â‰¥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	6786-83-0	Not Used	
75	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michlerâ€™s base)	101-61-1	Not Used	
76	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (Î²-TGIC)	59653-74-6	Not Used	
77	Diboron trioxide	1303-86-2	Not Used	
78	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	Not Used	
79	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with â‰¥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	561-41-1	Not Used	
80	Lead(II) bis(methanesulfonate)	17570-76-2	Not Used	
81	Formamide	27735	Not Used	
82	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [with â‰¥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	548-62-9	Not Used	

83	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	Not Used	
84	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) [with â‰¥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	2580-56-5	Not Used	
85	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	Not Used	
86	4,4'-bis(dimethylamino)benzophenone (Michlerâ€™s ketone)	90-94-8	Not Used	

Notes:

Where the product is an assembly with lower level parts, the declaration encompasses all lower level materials for which the manufacturer has engineering responsibility.

Azoteq does not perform any specific testing or management of PFOS. However, the use of PFOS (Perfluorooctane sulfonate) has been banned under the Marketing and Use Directive (2006/122/EC) from June 2008 in the EU, but since June 2009, this directive became Annex XVII of the REACH regulation and hence regulation of PFOS now falls under REACH. Azoteq therefore considers this REACH declaration to also include the use of PFOS.

Signed: **Anton Walles:**

Position: **Senior Logistics Engineer**

Date: 2012/10/31

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