

## **Zetex Material Data Sheet**

Reference: SM8 Solder Revision date: August 2006

Construction element	Material group	Materials	CAS (where available)	Average mass (%)	Sum (%)	Mass (mg)	ppm
Die Composition	Silicon	Silicon	7440-21-3	1.28	1.28	1.48	12773
Leadframe	K75 Alloy	Copper	7440-50-8	48.21	48.53	55.93	482117
		Chromium	7440-47-3	0.18		0.21	1810
		Titanium	7440-32-6	0.10		0.11	957
		Silicon	7440-21-3	0.04		0.04	371
Leadframe plating	Silver	Silver	7440-22-4	1.82	1.82	2.11	18173
	Nickel	Nickel	7440-02-0	0.21	0.21	0.25	2147
Die Attach Solder	Sn10Pb90	Lead	7439-92-1	1.08	1.14	1.25	10810
		Tin	7440-31-5	0.06		0.07	569
Wires	Gold	Gold	7440-57-5	0.66	0.66	0.76	6569
Encapsulation	Filled Epoxy	Phenolix resin	37382-79-9	5.57	44.41	6.46	55718
		Epoxy resin	9003-35-4	5.57		6.46	55718
		Brominated Epoxy	68541-56-0	0.414		0.46	3996
		Silica	7631-86-9	31.52		36.57	315219
		Antimony oxide	1309-64-4	1.11		1.29	11099
		Carbon Black	1333-86-4	0.22		0.26	2220
Lead finish	Matte Tin	Tin	7440-31-5	1.97	1.97	2.29	19733
	•	•	•	Sum in Total:	100.00	116.00	

Fluctuation margin ±10%

This environmental data is based on information provided by our suppliers; we believe it to be correct but do not routinely validate it by measurement.

The information is for guidance only, and Zetex does not guarantee its absolute accuracy or completeness.

The active part of each device is a silicon chip doped at atomic levels (some tens of ppb) with Phosphorus, Boron and Arsenic. The back of the die is raw or metallized with thin layers of Titanium, Nickel, Silver or Gold in order to enhance the die bonding to the header or leadframe. These and other substances are not reported as being present in Zetex products where their concentration is less than 20ppm, as they are not considered detectable by normal analytical methods.

The lead contained in the die attach solder is exempted from the RoHS Directive 2002/95/EC as in clause 7 of the Annex.

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