

Construction element	Material group	Materials	CAS (where available)	Average mass (%)	Sum (%)	Mass (mg)	ppm
Die Composition	Silicon	Silicon	7440-21-3	6.62	6.62	1.656	66216
Leadframe	Copper alloy	Copper	7440-50-8	38.11	39.15	9.531	381121
		Iron	7439-89-6	0.94		0.235	9395
		Zinc	7440-66-6	0.05		0.013	510
		Phosphorus	7723-14-0	0.03		0.008	315
		Lead	7439-92-1	0.01		0.003	118
Leadframe Plating	Silver	Silver	7440-22-4	0.08	0.08	0.020	785
Die Attach Adhesive	Silver loaded Epoxy	Silver	7440-22-4	0.09	0.12	0.0219	876
		Epoxy resin	9003-36-5	0.02		0.0054	216
		T-butyl phenyl glycidyl ether	3101-60-8	0.01		0.0021	84
Wires	Gold wire	Gold	7440-57-5	0.80	0.80	0.200	7997
Encapsulation	Filled Epoxy	Silica Fused	60676-86-0	42.22	52.80	10.560	422248
		Epoxy resin	Proprietary	4.10		1.025	40967
		Phenol resin	Proprietary	3.17		0.793	31717
		Metal Hydroxide	Proprietary	3.17		0.793	31717
		Carbon Black	1333-86-4	0.13		0.033	1322
Lead finish	Sn=100	Matte Tin	7440-31-5	0.44	0.44	0.110	4398
Sum in Total:					100	25.009	

Fluctuation margin	±10%
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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.

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