



Product Content Sheet

| | | |
|-----------------------|---------------------|--------------------------------------|
| Package family | SO-8 dual lead-free | Picture of typical product, optional |
| Date | July 21, 2004 | |
| Version | A | |

| Composition part | Material group | Materials | Test report | CAS if applicable | Average mass (weight-%)* | Sum (%) | Traces (PPM) |
|------------------|----------------|-----------|-------------|-------------------|--------------------------|---------|--------------|
| Copper | Leadframe | | | 7440-50-8 | 0.028 g | 32.00 | 323382 |
| Zinc | Leadframe | | | 7440-66-6 | 0.000035 g | 0.04 | 398 |
| Phosphorous | Leadframe | | | 7723-14-0 | 0.0000087 g | 0.01 | 99 |
| Iron | Leadframe | | | 7439-89-6 | 0.00067 g | 0.76 | 7625 |
| Silicon | Die | | | 7440-21-3 | 0.0117 g | 13.53 | 134431 |
| Aluminum | Die | | | 7429-90-5 | 0.00012 | 0.14 | 1372 |
| Resin | Die attach | | | | 0.00041 g | 0.47 | 4664 |
| Silver | Die attach | | | 7440-22-4 | 0.0006 g | 0.69 | 6996 |
| Gold | Bondwire | | | 7440-57-5 | 0.00038 g | 0.44 | 4343 |
| SbO2 | Encapsulant | | | 7440-36-0 | 0.00133 g | 1.53 | 15219 |
| Bromide | Encapsulant | | | 21308-80-5 | 0.00044 g | 0.51 | 5073 |
| Bromine | Encapsulant | | | 10097-32-2 | 0.000001 g | 0.001 | 10 |
| Other | Encapsulant | | | | 0.043 g | 49.43 | 487023 |
| Tin | Plating | | | 7440-31-5 | 0.00070 g | 0.80 | 8002 |

| | |
|---------------------|--------|
| Sum in total | 100.00 |
|---------------------|--------|

*)Related to package weight; weight in particular, see corresponding package weight list
 **)Slug / wire / frame / terminal can be a combination for device leads
 ***)Utilized as flame retardant

| Package Weight List | | |
|---------------------|--|---------------|
| Package Family | Pin Count | Weight(grams) |
| SO8 | 8 | 0.087 |
| | Weight range: | |
| | Fluctuation margin: | |
| Company | Vishay Siliconix | |
| Address | 2201 Laurelwood Dr Santa Clara, Ca 95054 | |
| E-mail | Dave.macdonald@vishay.com | |
| Intrnet | www.vishay.com | |

Important remarks :

- Traces are product parts, substances etc. that are below a percentage of 0.1% by weight. Higher limits are accepted if the substance or material is Legally regulated (see note no. 2).
- Refer to ELV (end-of-life vehicles) and Uspec (Umbrella spec) at: http: http:
- Substances, materials etc. with possible harmful effects on Human beings and the environment are listed.
- There are no risks for human beings and to the environment if products are properly used as designated. This shall not apply to risks caused during procedures for disposal etc.
- All statements herein are based on our present knowledge. If our products are used properly, there are no risks to Human beings and/or the environment.



TO:

FROM:

SUBJECT: Warranty for Non-Inclusion of Hazardous Substances in Products

DATE: June 22, 2004

Dear Sir/Madam,

It is the policy of Vishay Siliconix to:

1. Meet all present and future national and international statutory requirements.
2. Regularly and continuously improve the performance of our products, processes, Distribution and operating systems with respect to their impact on the health and Safety of our employees and the public, as well as their impact on the environment.

It is of particular concern to control or eliminate the use of those substances with established hazardous properties.

With this objective we have reviewed our manufacturing processes and materials Against the following directives:

- a) 2000/53/EC End of Vehicle Life Directive (EVL)
- b) 2000/53/EC Annex II to End of Vehicle Life (EVL II)
- c) 2002/95/EC Restriction of the use of Hazardous Substances Directive (RoHS)
- d) 2002/96/EC Waste Electrical and Electronic Equipment (WEEE)
- e) Montreal Agreement (ODS material)

We hereby warrant and guarantee that the customer approved products supplied by our Company comply fully with these directives and do not and will not contain any of the Following substances

- Cadmium and cadmium compounds;
- PBB (polybromobiphenyl) category and PBDE (polybrominated biphenyl ethers)category;
- Pentabromodiphenyl ether (Penta BDE) and Octabromodiphenyl ether (OctaBDE);
- Chlorinated paraffin (chlorine flame retarding materials / plasticizers);
- Polychloriated biphenyl (PCB) category;
- Polychlorinated naphthalene category;
- Organic tin compounds (Tributhyl tin category & Triphenyl tin category);
- Asbestos, and
- Azo compounds.



In making this warranty we use the following exemptions as outlined in EVL II & RoHS.

| Materials and Components | Scope of Exemption | Expiration Date of Exemption | Vishay Function/Application |
|---|---|-------------------------------------|------------------------------------|
| Solder in electronic Circuit boards and other Electric applications | Lead in high melting temperature type solders(i.e. tin-lead solder alloys containing more than 85% lead). | None announced | Internal Die Attach |
| Electrical components Which contain lead in a glass or ceramic matrix Compound, except glass In bulbs and glaze of Spark plugs. | | None announced | Glass passivation at die level. |

Material Declaration

Material Declaration reports on individual part numbers of product families are available using any of the following internationally recognized formats.

| | Application | Reference Link |
|----|--|-----------------------|
| 1. | End-Of-Life Vehicles(ELV) Reporting Guideline and Compliance Connect™ Tool | http: |
| 2. | International Material Data System | http: |
| 3. | ZVEI Umbrella Specification | http: |

Lead Free Plating

The position of Vishay Siliconix regarding lead-free terminal plating has been published elsewhere. All products are available with a lead-free finish. Please Contact your Marketing or Customer Service Representative for details.

sign _____

name David MacDonal

post and rank Technical Marketing Engineer

Vishay Siliconix

e-mail: Dave.macdonald@vishay.com