

Certificate of Compliance

DUNS		Document Date	URL for Additional Information
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Material Declaration Processing Information

FSID	Material Declaration	Site Owner	Assembly Location	Package Weight(g)	MSL Rating
74ALVC16244MTD	TSSOP-48 (NiPdAu) (G)	PENANG	INTERNAL PENANG	0.192	2
Terminal Finish	Base Alloy	Green Status	Reflow Cycles	Max Time at Temp	Peak Temp
Nickel/Palladium/Gold (Ni/Pd/Au)	CU Alloy	Does NOT Contain Halogens (Flame Retardant Free). This product is Green as defined by Fairchild; specifically the concentration of Chlorine, Bromine and Antimony is less than 900 ppm and the sum concentration of Chlorine and Bromine is less than 1500 ppm	3	30	260

Homogenous Material Composition Declaration

Component	Material	Weight of Component(mg)	Substance	Weight (mg)	CAS	PPM in FSID
Chip	Other inorganic materials	2.300	Silicon	2.300	7440-21-3	11994
Die Attach	Other Organic Materials	0.272	Acrylic Resin	0.071	54208-63-8	369
			Silver	0.201	7440-22-4	1048
Encapsulation	Thermoplastics	111.000	Carbon Black	1.111	1333-86-4	5794
			Epoxy Resin	11.110	29690-82-2	57936
			Silica, vitreous	98.879	60676-86-0	515635
Lead Frame	Copper & its alloys	70.200	Magnesium	0.105	7439-95-4	548
			Silver	0.324	7440-22-4	1690
			Silicon	0.456	7440-21-3	2378
			Nickel	2.110	7440-02-0	11003
			Copper	67.200	7440-50-8	350435
Plating	Precious metals	6.700	Gold	0.127	7440-57-5	662
			Palladium	0.188	7440-05-3	980
			Nickel	6.390	7440-02-0	33323
Wire Bond		1.190	Gold	1.190	7440-57-5	6206

Note: The substance content disclosed herewith is approximate and is based on various methods including, engineering calculations, supplier surveys, Material Safety Data Sheets, analytical measurements. Fairchild may update this document without notification.

Additionally, the following should be noted:

- This statement may not include information regarding the minute quantities of dopant and metal materials in the electrical devices contained within the finished product.
- CAS numbers listed for Resin substances are generic and may contain alternate substances of similar composition.

RoHS Declaration

The European Parliament and of the Council on the Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) directive restricts the concentration of Lead (Pb), Mercury (Hg), Hexavalent Chromium (Cr6+), Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE) to 0.1% (1000 PPM) and restricts the concentration of Cadmium (Cd) to 0.01% (100 PPM) in homogeneous materials of electronic products.

The FSC part number listed above and the homogenous materials in the product are compliant with the Directive 2011/65/EU of FSC is aware of the Courts annulment of the exemption of decabromodiphenyl ether (decaBDE) effective June 08, 2011. FSC products do not contain Decabromodiphenyl ether (decaBDE).

Exemptions as declared for the directive are: 0

China RoHS

With the possible exception of lead, if applicable (refer to the RoHS Declaration statement above), this product and all homogeneous materials in the product comply with the China RoHS standard SJ/T 11363-2006.

REACH Compliance

The 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) entered into force on June 1, 2007. Fairchild Semiconductor 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. Fairchild Semiconductor is compliant with all applicable requirements of REACH and has provided information regarding the chemical composition of our product(s) in this document.

Fairchild Semiconductor is neither a manufacturer nor importer of preparations into Europe and therefore the registration requirements do not apply to us. It is expected that any electronic materials manufacturers that use preparations from Europe in their products will ensure compliance with REACH registration requirements.

Product (articles) 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 a 0.1% concentration (by weight per article). Products manufactured and marketed by Fairchild Semiconductor **do not** contain substances on the REACH SVHC candidate list in concentrations greater than 0.1% by weight per article.

Fairchild will continue to monitor the developments of the REACH legislation and is committed to meeting our responsibilities as an environmentally-responsible company. Refer to the ECHA European Chemical Agency weblink for a complete list of SVHC.
[ECHA European Chemical Agency](#)

Joint Industry Guide (JIG) 101

With the exception of RoHS exemptions listed above (if applicable), this product does not contain any restricted substances listed in the Joint Industry Guide (JIG) 101 in concentrations greater than the threshold listed.

Substance Name	Threshold
Asbestos	Intentionally added
Certain Azocolourants and Azodyes	Intentionally added
Cadmium / Cadmium Compounds	75 Ppm or Intentionally added
Hexavalent Chromium / Hexavalent Chromium Compounds	1000 ppm or intentionally added
Lead / Lead Compounds	1000 ppm or intentionally added
Mercury / Mercury Coumpounds	1000 ppm or intentionally added
Ozone Depleting substances (CFCs, HCFCs, HBFCs, carbon tetrachloride)	Class I: Intentionally added Class I: HCFCs 1000 ppm
Polybrominated Biphenyls (PBBs)	1000 ppm or intentionally added
Polybrominated Diphenylethers (PBDEs)	1000 ppm or intentionally added
Polychlorinated Biphenyl's (PCBs)	1000 ppm or intentionally added
Polychlorinated Naphthalenes (more than 3 chlorine atoms)	Intentionally added
Radioactive substances	Intentionally added
Certain Shortchain Chloronated Pataffins	Intentionally added
Tributyl Tin (TBT) and Triphenyl Tin (TPT)	Intentionally added
Tributyl Tin Oxide (TBTO)	Intentionally added

[Joint Industry Guide \(JIG\) 101](#)

The signature below is of the Company's designated personnel with delegated product ecology compliance responsibility and verifies that to the best of our knowledge the statements above are valid and accurate.

David Lancaster



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Environmental Declaration

The content of this document is based upon information collected from Fairchild Semiconductor's supply chain, manufacturing facilities and affiliates worldwide. Providing for limitations below, Fairchild Semiconductor certifies that the information provided in this document is correct as of the date indicated on this page.

Fairchild has implemented systems to ensure our products are compliant to environmental regulations and laws worldwide. However, not all materials in Fairchild's products may have been independently verified regarding substance content. In the event of any issues arising from information in this document, the warranty section of Fairchild's standard terms and conditions of sale shall apply, unless alternate contracts have been agreed upon in writing by both parties.