

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
FSA321UMX	10-uMLP 1.4X1.8 (TFSn)	PENANG	INTERNAL PENANG	0.004	1
Terminal Finish	Base Alloy	Green Status	Reflow Cycles	Max Time at Temp	Peak Temp
Matte Tin (Sn)	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	0.191	Silicon	0.191	7440-21-3	53544
Die Attach	Other Organic Materials	0.127	Acrylic Resin	0.127	54208-63-8	35603
Encapsulation	Thermoplastics	2.550	Carbon Black	0.026	1333-86-4	7149
			Zinc Borate	0.077	1332-07-6	21446
			Epoxy Resin	0.408	29690-82-2	114377
			Silica, vitreous	2.040	60676-86-0	571884
Lead Frame	Other Ferrous alloys, non-stainless steels	0.616	Phosphorus	0.001	7723-14-0	259
			Zinc	0.001	7440-66-6	345
			Iron	0.016	7439-89-6	4485
			Copper	0.598	7440-50-8	167641
Terminal Finish	Other Nonferrous metals & alloys	0.015	Tin	0.015	7440-31-5	4205
Wire Bond	Precious metals	0.068	Gold	0.068	7440-57-5	19063

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.