The following document contains information about Cypress products. Although the document is marked with the name "Spansion", which is the company that originally generated the documents, Cypress will continue to provide access to this document for existing and new customers.

Continuity of Documents

There is no change to this document as a result of products offered by Cypress.

For More Information

Please contact your local sales office for additional information about Cypress products.

About Cypress

Please contact your local sales office for additional information about Cypress products. Cypress delivers high-performance, high-quality solutions at the heart of today's most advanced embedded systems, from automotive, industrial and networking platforms to highly interactive consumer and mobile devices. With a broad, differentiated product portfolio that includes NOR flash memories, F-RAM and SRAM, Traveo™ microcontrollers, the industry's only PSoC® programmable system-on-chip solutions, analog and PMIC Power Management ICs, CapSense® capacitive touch-sensing controllers, and Wireless BLE Bluetooth® Low-Energy and USB connectivity solutions, Cypress is committed to providing its customers worldwide with consistent innovation, best-in-class support and exceptional system value. To learn more, go to www.cypress.com.

CHAPTER 2 PACKAGE MATERIALS

Introduction

IEC62474 Declarable Substance List D7.00

Reporting of 161 Substances of Very High Concern (EU REACH)

Material Declaration Data Sheets

INTRODUCTION

Spansion is committed to delivering safe and environmentally responsible products to our customers. We monitor voluntary and regulatory standards in all regions of the world where Spansion operates to ensure compliance with all applicable requirements. This chapter of the Spansion Package and Packaging Guide will provide the information you need to ensure Spansion products meet or exceed regulatory specifications applicable to the sale of your products.

The material content of Spansion packages have been analyzed per the requirements defined in the latest revision of International Electrotechnical Commission (IEC)'s Material Declaration for Products of and for the Electrotechnical Industry released in September 2014. IEC's guide identifies three designations for substances/materials: (a) regulated, (b) for assessment, or (c) for information only. These three designations determine whether the substances/materials are required to be declared. Materials in Spansion products along with the disclosure designation and rationale can be found starting on *page 2-4*.

Spansion's RoHS-compliant products comply with the "maximum concentration" restrictions in the EU Directive on the Restriction of Hazardous Substances ("RoHS Directive") 2011/65/EU, with respect to lead (Pb), mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), and polybrominateddiphenyl ethers (PBDE). Our products also meet the requirements of China's Administrative Measure on the Control of Pollution Caused by Electronic Information Products (China RoHS).

All other Spansion products comply with the RoHS Directive 2011/65/EU, with respect to all substance concentration restrictions except lead (Pb). The lead containing products are designated specifically for lead soldering purposes. Spansion encourages customers who still use Pb products to migrate to Pb-free products

The European Chemical Agency (ECHA) is working to regulate Substances of Very High Concern (SVHCs) consistent with the European Union (EU) Registration, Evaluation, Authorization and Restriction of Chemical (REACH) Regulation. The first candidate list of SVHCs was published in September 2008. Since that time, additional substances have been added to the candidate list by the European Chemicals Agency (ECHA).

Since the publication of the first list, Spansion has worked closely with our suppliers to ensure we identify and disclose any substance contained in our products that are on the REACH candidate list of SVHC. At this time, no Spansion product contains any of the substances identified on the most recent list published in December 2014.

Reporting of Substances of Very High Concern (EU REACH). Spansion products have been analyzed per the candidate list of SVHCs. The presence of the latest 161 SVHC candidate substances in Spansion products can be found starting on *page 2-6*.

Questions or requests for additional information on material contents of Spansion products can be obtained by e-mail at product.sustainability@spansion.com.

Material Declaration Data Sheets. A Material Declaration Data Sheet has been created for each Spansion package. Each declaration sheet contains the following information:

- Company name and contact email address
- Package and ball/lead count
- Dimensions and weight of package
- Temperature rating
- MSL (moisture sensitivity level)
- Chemicals present in the package

Please note that some variance in the data will be observed from package to package and is generally reported in hundredths (two decimal values) in the Material Declaration Data Sheets. The mass values presented are thought to be accurate to within 20 percent. The reports do not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

The Material Declaration Data Sheets for each package family can be found in the following pages.

To obtain an MDDS of current Spansion package offerings containing lead or other available options, please submit an email request to *product.sustainability@spansion.com*.

SPANSION®

IEC62474 DECLARABLE SUBSTANCE LIST D7.00

The Materials and Substances category are those, which by currently enacted legislation, Criteria Rationale for Disclosure (R-Regulated, A-For Assessment, I-For Information Only). The table below lists the status of the presence of each regulated, for assessment only and for information only materials/substances in Spansion packages.

The Substances below are listed in declarable substance list except the ones duplicated in Annex XVII or SVHC list of REACH.

Material / Substance Category Name	Criteria Rationale for Disclosure	Status
4-[4,4'-bis (dimethylamino) benzhydrylidene] cyclohexa-2,5-dien-1-ylidene] dimethyl ammonium chloride (C.I. Basic Violet 3)	A	Not present in Spansion products.
Asbestos	R	Not present in Spansion products.
Azocolorants & azodyes which form certain aromatic amines.	R	Not present in Spansion products.
Beryllium Oxide (BeO)	I	Not present in Spansion products.
Brominated Flame Retardants (other than PBBs, PBDEs or HBCDD)	I	May be present in Spansion products. See individual Material Declaration Data Sheet for details.
Cadmium/Cadmium compounds	R	Not present in Spansion products.
Chlorinated Flame Retardants (CFR)	I	Not present in Spansion products.
Chromium (VI) compounds	R	Not present in Spansion products.
Dibutyltin (DBT) Compounds	R	Not present in Spansion products.
Dimethyl Fumarate (DMF)	R	Not present in Spansion products.
Di-n-hexyl Phthalate (DnHP)	R	Not present in Spansion products.
Diisononyl phthalate (DINP)	R	Not present in Spansion products.
Dioctyltin (DOT) Compounds	R	Not present in Spansion products.
Fluorinated Greenhouse gases (PFC, SF6, HFC)	R	Not present in Spansion products.
Formaldehyde	R	Not present in Spansion products.
Lead/Lead Compounds	R	May be present in Spansion products. See individual Material Declaration Data Sheet for details.
Mercury/Mercury Compounds	R	Not present in Spansion products.
Nickel	R	May be present in Spansion products but not in prolonged contact with human skin. See individual Material Declaration Data Sheet for details.
Ozone Depleting Substances (CFC, Halon, HBFC, HCFC & others)	R	Not present in Spansion products.
Perchlorates	R	Not present in Spansion products.

Note: "Not present" means not present above the threshold level specified by IEC62474.

SPANSION®

Material / Substance Category Name	Criteria Rationale for Disclosure	Status
Perfluorooctane Sulfonate (PFOS)	R	Not present in Spansion products.
Phenol,2-(2H-Benzotriazol-2-yl)-4,6-bis (1,1-dimethylethyl)	R	Not present in Spansion products.
Phthalates, Selected Group 1 (BBP, DBP, DEHP)	R	Not present in Spansion products.
Phthalates, Selected Group 2 (DIDP, DINP, DNOP)	R	Not present in Spansion products.
Polybrominated Biphenyls (PBBs)	R	Not present in Spansion products.
Polybrominated Diphenylethers (PBDEs)	R	Not present in Spansion products.
Polychlorinated Biphenyls (PCBs) and specific substitutes.	R	Not present in Spansion products.
Polychlorinated Naphthalenes (PCNs)	R	Not present in Spansion products.
Polychlorinated Terphenyls (PCTs)	R	Not present in Spansion products.
Radioactive Substances	R	Not present in Spansion products.
Shortchain Chlorinated Paraffins (C10-C13)	R	Not present in Spansion products.
Tributyl Tin Oxide (TBTO)	R	Not present in Spansion products.
Tri-substituted Organostannic Compounds	R	Not present in Spansion products.

Note: "Not present" means not present above the threshold level specified by IEC62474.

REPORTING OF 161 SUBSTANCES OF VERY HIGH CONCERN (EU REACH)

Material / Substance Category Name	CAS Number	Status
1,2,3-Trichloropropane	96-18-4	Not present in Spansion products.
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	Not present in Spansion products.
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	Not present in Spansion products.
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	Not present in Spansion products.
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	Not present in Spansion products.
1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	Not present in Spansion products.
1,2-Dichloroethane	107-06-2	Not present in Spansion products.
1,2-Diethoxyethane	629-14-1	Not present in Spansion products.
1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	Not present in Spansion products.
1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	Not present in Spansion products.
1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC)	59653-74-6	Not present in Spansion products.
1-bromopropane (n-propyl bromide)	106-94-5	Not present in Spansion products.
1-Methyl-2-pyrrolidone	872-50-4	Not present in Spansion products.
2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	Not present in Spansion products.
2,4-Dinitrotoluene	121-14-2	Not present in Spansion products.
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	Not present in Spansion products.
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	Not present in Spansion products.
2-Ethoxyethanol	110-80-5	Not present in Spansion products.
2-Ethoxyethyl acetate	111-15-9	Not present in Spansion products.
2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	Not present in Spansion products.
2-Methoxyaniline; o-Anisidine	90-04-0	Not present in Spansion products.
2-Methoxyethanol	109-86-4	Not present in Spansion products.
3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	Not present in Spansion products.
4,4'- Diaminodiphenylmethane (MDA)	101-77-9	Not present in Spansion products.

Note: "Not present" means not present above the concentration specified by REACH.

SPANSION®

Material / Substance Category Name	CAS Number	Status
4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	561-41-1	Not present in Spansion products.
4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	Not present in Spansion products.
4,4'-methylenedi-o-toluidine	838-88-0	Not present in Spansion products.
4,4'-oxydianiline and its salts	101-80-4	Not present in Spansion products.
4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	140-66-9	Not present in Spansion products.
4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated	-	Not present in Spansion products.
4-Aminoazobenzene	60-09-3	Not present in Spansion products.
4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	Not present in Spansion products.
4-Nonylphenol, branched and linear	-	Not present in Spansion products.
4-Nonylphenol, branched and linear, ethoxylated	-	Not present in Spansion products.
5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	Not present in Spansion products.
6-methoxy-m-toluidine (p-cresidine)	120-71-8	Not present in Spansion products.
[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3)	548-62-9	Not present in Spansion products.
[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26)	2580-56-5	Not present in Spansion products.
[Phthalato(2-)]dioxotrilead	69011-06-9	Not present in Spansion products.
Acetic acid, lead salt, basic	51404-69-4	Not present in Spansion products.
Acids generated from chromium trioxide and their oligomers. Names of the acids and their oligomers: Chromic acid, Dichromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid	7738-94-5 / 13530-68-2	Not present in Spansion products.
Acrylamide	79-06-1	Not present in Spansion products.
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	Not present in Spansion products.
Aluminiosilicate, Refractory Ceramic Fibres	650-017-00-8	Not present in Spansion products.
Ammonium dichromate	7789-09-5	Not present in Spansion products.

Note: "Not present" means not present above the concentration specified by REACH.

Material / Substance Category Name	CAS Number	Status
Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	Not present in Spansion products.
Anthracene	120-12-7	Not present in Spansion products.
Anthracene oil	90640-80-5	Not present in Spansion products.
Anthracene oil, anthracene paste	90640-81-6	Not present in Spansion products.
Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	Not present in Spansion products.
Anthracene oil, anthracene paste, distn. Lights	91995-17-4	Not present in Spansion products.
Anthracene oil, anthracene-low	90640-82-7	Not present in Spansion products.
Arsenic acid	7778-39-4	Not present in Spansion products.
Benzyl butyl phthalate (BBP)	85-68-7	Not present in Spansion products.
Biphenyl-4-ylamine	92-67-1	Not present in Spansion products.
Bis (2-ethyl(hexyl)phthalate) (DEHP)	117-81-7	Not present in Spansion products.
Bis (2-methoxyethyl) ether	111-96-6	Not present in Spansion products.
Bis (2-methoxyethyl) phthalate	117-82-8	Not present in Spansion products.
Bis(pentabromophenyl) ether (DecaBDE)	1163-19-5	Not present in Spansion products.
Bis(tributyltin)oxide (TBTO)	56-35-9	Not present in Spansion products.
Boric acid	10043-35-3 / 11113-50-1	Not present in Spansion products.
Cadmium	7440-43-9	Not present in Spansion products.
Cadmium chloride	10108-64-2	Not present in Spansion products.
Cadmium fluoride	7790-79-6	Not present in Spansion products.
Cadmium oxide	1306-19-0	Not present in Spansion products.
Cadmium sulphate	10124-36-4 / 31119-53-6	Not present in Spansion products.
Cadmium sulphide	1306-23-6	Not present in Spansion products.
Calcium arsenate	7778-44-1	Not present in Spansion products.
Chromium trioxide	1333-82-0	Not present in Spansion products.
Cobalt dichloride	7646-79-9	Not present in Spansion products.
Cobalt(II) carbonate	513-79-1	Not present in Spansion products.
Cobalt(II) diacetate	71-48-7	Not present in Spansion products.
Cobalt(II) dinitrate	10141-05-6	Not present in Spansion products.
Cobalt(II) sulphate	10124-43-3	Not present in Spansion products.
Cyclohexane-1,2-dicarboxylic anhydride , cis-cyclohexane-1,2-dicarboxylic anhydride , trans-cyclohexane-1,2-dicarboxylic anhydride	85-42-7, 13149-00-3, 14166-21-3	Not present in Spansion products.

Note: "Not present" means not present above the concentration specified by REACH.

SPANSION®

Material / Substance Category Name	CAS Number	Status
Diarsenic pentaoxide	1303-28-2	Not present in Spansion products.
Diarsenic trioxide	1327-53-3	Not present in Spansion products.
Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	Not present in Spansion products.
Diboron trioxide	1303-86-2	Not present in Spansion products.
Dibutyl phthalate (DBP)	84-74-2	Not present in Spansion products.
Dibutyltin dichloride (DBTC)	683-18-1	Not present in Spansion products.
Dichromium tris (chromate)	24613-89-6	Not present in Spansion products.
Diethyl sulphate	64-67-5	Not present in Spansion products.
Dihexyl phthalate	84-75-3	Not present in Spansion products.
Diisobutyl phthalate (DIBP)	84-69-5	Not present in Spansion products.
Diisopentylphthalate	605-50-5	Not present in Spansion products.
Dimethyl sulphate	77-78-1	Not present in Spansion products.
Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	Not present in Spansion products.
Dioxobis(stearato)trilead	12578-12-0	Not present in Spansion products.
Dipentyl phthalate (DPP)	131-18-0	Not present in Spansion products.
Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	Not present in Spansion products.
Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	1937-37-7	Not present in Spansion products.
Disodium tetraborate, anhydrous	1303-96-4/ 1330-43-4/ 12179-04-3	Not present in Spansion products.
Fatty acids, C16-18, lead salts	91031-62-8	Not present in Spansion products.
Formaldehyde, oligomeric reaction products with aniline	25214-70-4	Not present in Spansion products.
Formamide	75-12-7	Not present in Spansion products.
Furan	110-00-9	Not present in Spansion products.
Henicosafluoroundecanoic acid	2058-94-8	Not present in Spansion products.
Heptacosafluorotetradecanoic acid	376-06-7	Not present in Spansion products.
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	25637-99-4 / 3194-55-6 / (134237-50-6) / (134237-51-7) / (134237-52-8)	Not present in Spansion products.

Note: "Not present" means not present above the concentration specified by REACH.

SPANSION®

Material / Substance Category Name	CAS Number	Status
Hexahydromethylphathalic anhydride, Hexahydro-4-methylphathalic anhydride, Hexahydro-1-methylphathalic anhydride, Hexahydro-3-methylphathalic anhydride	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	Not present in Spansion products.
Hydrazine	302-01-2 / 7803-57-8	Not present in Spansion products.
Imidazolidine-2-thione; (2-imidazoline-2-thiol)	96-45-7	Not present in Spansion products.
Lead bis(tetrafluoroborate)	13814-96-5	Not present in Spansion products.
Lead chromate	7758-97-6	Not present in Spansion products.
Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8	Not present in Spansion products.
Lead cyanamidate	20837-86-9	Not present in Spansion products.
Lead di(acetate)	301-04-2	Not present in Spansion products.
Lead diazide Lead azide	13424-46-9	Not present in Spansion products.
Lead dinitrate	10099-74-8	Not present in Spansion products.
Lead dipicrate	6477-64-1	Not present in Spansion products.
Lead hydrogen arsenate	7784-40-9	Not present in Spansion products.
Lead monoxide (lead oxide)	1317-36-8	Not present in Spansion products.
Lead oxide sulfate	12036-76-9	Not present in Spansion products.
Lead styphnate	15245-44-0	Not present in Spansion products.
Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	Not present in Spansion products.
Lead titanium trioxide	12060-00-3	Not present in Spansion products.
Lead titanium zirconium oxide	12626-81-2	Not present in Spansion products.
Lead(II) bis(methanesulfonate)	17570-76-2	Not present in Spansion products.
Methoxyacetic acid	625-45-6	Not present in Spansion products.
Methyloxirane (Propylene oxide)	75-56-9	Not present in Spansion products.
N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	Not present in Spansion products.
N,N-dimethylacetamide (DMAC)	127-19-5	Not present in Spansion products.
N,N-dimethylformamide	68-12-2	Not present in Spansion products.
N-methylacetamide	79-16-3	Not present in Spansion products.
N-pentyl-isopentylphtalate	776297-69-9	Not present in Spansion products.
o-aminoazotoluene	97-56-3	Not present in Spansion products.
o-Toluidine	95-53-4	Not present in Spansion products.
Orange lead (lead tetroxide)	1314-41-6	Not present in Spansion products.
Pentacosafluorotridecanoic acid	72629-94-8	Not present in Spansion products.

Note: "Not present" means not present above the concentration specified by REACH.

SPANSION®

Material / Substance Category Name	CAS Number	Status
Pentadecafluorooctanoic acid (PFOA)	335-67-1	Not present in Spansion products.
Pentalead tetraoxide sulphate	12065-90-6	Not present in Spansion products.
Pentazinc chromate octahydroxide	49663-84-5	Not present in Spansion products.
Phenolphthalein	77-09-8	Not present in Spansion products.
Pitch, Coal tar, high temp.	-	Not present in Spansion products.
Potassium chromate	7789-00-6	Not present in Spansion products.
Potassium dichromate	7778-50-9	Not present in Spansion products.
Potassium hydroxyoctaoxodizincatedichromate	11103-86-9	Not present in Spansion products.
Pyrochlore, antimony lead yellow	8012-00-8	Not present in Spansion products.
Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)	-	Not present in Spansion products.
Silicic acid (H2Si2O5), barium salt (1:1), lead-doped	68784-75-8	Not present in Spansion products.
Silicic acid, lead salt	11120-22-2	Not present in Spansion products.
Sodium chromate	7775-11-3	Not present in Spansion products.
Sodium dichromate	7789-12-0/ 10588-01-9	Not present in Spansion products.
Sodium perborate; perboric acid, sodium salt	-	Not present in Spansion products.
Sodium peroxometaborate	7632-04-4	Not present in Spansion products.
Strontium chromate	7789-06-2	Not present in Spansion products.
Sulfurous acid, lead salt, dibasic	62229-08-7	Not present in Spansion products.
Tetraboron disodium heptaoxide, hydrate	12267-73-1	Not present in Spansion products.
Tetraethyllead	78-00-2	Not present in Spansion products.
Tetralead trioxide sulphate	12202-17-4	Not present in Spansion products.
Trichloroethylene	79-01-6	Not present in Spansion products.
Tricosafluorododecanoic acid	307-55-1	Not present in Spansion products.
Triethyl arsenate	15606-95-8	Not present in Spansion products.
Trilead bis(carbonate)dihydroxide	1319-46-6	Not present in Spansion products.
Trilead diarsenate	3687-31-8	Not present in Spansion products.
Trilead dioxide phosphonate	12141-20-7	Not present in Spansion products.
Tris(2-chloroethyl)phosphate	115-96-8	Not present in Spansion products.
Trixylyl phosphate	25155-23-1	Not present in Spansion products.

Note: "Not present" means not present above the concentration specified by REACH.

SPANSION®

Material / Substance Category Name	CAS Number	Status
Zirconia Aluminosilicate, Refractory Ceramic Fibres	650-017-00-8	Not present in Spansion products.
α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)	6786-83-0	Not present in Spansion products.

Note: "Not present" means not present above the concentration specified by REACH.

Material Declaration Data Sheet: SOA 008 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type: 8-pin SOIC, Pb-free
Dimension: 4.9 mm x 3.9 mm
RoHS: Compliant
MSL: 3
Package Code: SOA 008
Weight of Unit Package: 73 mg
Temperature Rating: 260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	1.12	1.54	15,362
		Subtotal		1.12	1.54	15,362
Bond Wire	#1	Gold	7440-57-5	0.26	0.35	3,522
		Subtotal		0.26	0.35	3,522
Die Attach	#1	Epoxy Resin		0.014	0.02	191
	#2	Bisphenol A Glycidylether	25068-38-6	0.007	0.01	102
	#3	FusedSilica	60676-86-0	0.065	0.09	891
	#4	Additive		0.007	0.01	89
		Subtotal		0.093	0.13	1,273
Leadframe	#1	Copper	7440-50-8	22.87	31.32	313,232
	#2	Iron	12604-58-9	0.52	0.72	7,157
	#3	Phosphorus	7723-14-0	0.008	0.01	112
	#4	Zinc	7440-66-6	0.032	0.04	443
		Subtotal		23.43	32.09	320,944
Internal Plating	#1	Silver	7440-22-4	0.48	0.66	6,550
		Subtotal		0.48	0.66	6,550
Mold Compound	#1	Silica Fused	60676-86-0	40.64	55.66	556,650
	#2	Epoxy Resin		2.80	3.84	38,390
	#3	Epoxy, Cresol Novolac	29690-82-2	0.93	1.28	12,797
	#4	Phenol Resin		2.29	3.14	31,352
	#5	Carbon Black	1333-86-4	0.047	0.06	640
		Subtotal		46.71	63.98	639,827
External Plating	#1	Tin	7440-31-5	0.91	1.25	12,522
		Subtotal		0.91	1.25	12,522
			TOTAL PACKAGE WEIGHT	**73.00**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: SOC 008 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type: 8-pin SOIC, Pb-free | **Package Code:** SOC 008
Dimension: 5.28 mm x 5.28 mm | **Weight of Unit Package:** 132 mg
RoHS: Compliant | **MSL:** 3 | **Temperature Rating:** 260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	6.30	4.76	47,575
		Subtotal		6.30	4.76	47,575
Bond Wire	#1	Gold	7440-57-5	0.060	0.05	453
		Subtotal		0.060	0.05	453
Die Attach	#1	Silver flake	7440-22-4	0.91	0.68	6,846
	#2	Acrylic Resin		0.10	0.08	771
	#3	Plybutadiene derivative		0.066	0.05	499
	#4	Butadiene copolymer		0.012	0.01	91
	#5	Acrylate		0.066	0.05	499
	#6	Epoxy Resin		0.030	0.02	227
	#7	Peroxide		0.006	0.00	45
	#8	Additive		0.012	0.01	91
		Subtotal		1.20	0.91	9,068
Leadframe	#1	Copper	7440-50-8	47.97	36.25	362,496
	#2	Iron	7439-89-6	1.19	0.90	8,969
	#3	Phosphorus	7723-14-0	0.042	0.03	317
	#4	Zinc	7440-66-6	0.063	0.05	476
		Subtotal		49.26	37.23	372,259
Internal Plating	#1	Silver	7440-22-4	1.26	0.95	9,544
		Subtotal		1.26	0.95	9,544
Mold Compound	#1	Silica Fused	60676-86-0	61.30	46.32	463,208
	#2	Epoxy Resin-1		2.45	1.85	18,513
	#3	Epoxy Resin-2		3.85	2.91	29,092
	#4	Phenol Resin		3.50	2.64	26,447
	#5	Carbon Black	1333-86-4	0.11	0.08	793
		Subtotal		71.21	53.81	538,054
External Plating	#1	Tin	7440-31-5	3.05	2.30	23,047
		Subtotal		3.05	2.30	23,047
			TOTAL PACKAGE WEIGHT	**132.34**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: SOC 008 (Pb-free) Copper Wire

Company Name:	Spansion, Inc.
Contact Name and Address:	product.sustainability@spansion.com

Package Type:	8-pin SOIC, Pb-free			**Package Code:**	SOC 008
Dimension:	5.28 mm x 5.28 mm			**Weight of Unit Package:**	132 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description	Chemicals Present		CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	6.30	4.76	47,590
		Subtotal		6.30	4.76	47,590
Bond Wire	#1	Copper	7440-50-8	0.019	0.01	144
	#2	Palladium	7440-05-3	0.001	0.00	8
		Subtotal		0.020	0.015	151
Die Attach	#1	Silver flake	7440-22-4	0.91	0.68	6,848
	#2	Acrylic Resin		0.10	0.08	771
	#3	Plybutadiene derivative		0.066	0.05	499
	#4	Butadiene copolymer		0.012	0.01	91
	#5	Acrylate		0.066	0.05	499
	#6	Epoxy Resin		0.030	0.02	227
	#7	Peroxide		0.006	0.00	45
	#8	Additive		0.012	0.01	91
		Subtotal		1.20	0.91	9,070
Leadframe	#1	Copper	7440-50-8	47.97	36.26	362,606
	#2	Iron	7439-89-6	1.19	0.90	8,972
	#3	Phosphorus	7723-14-0	0.042	0.03	317
	#4	Zinc	7440-66-6	0.063	0.05	476
		Subtotal		49.26	37.24	372,371
Internal Plating	#1	Silver	7440-22-4	1.26	0.95	9,547
		Subtotal		1.26	0.95	9,547
Mold Compound	#1	Silica Fused	60676-86-0	61.30	46.33	463,348
	#2	Epoxy Resin-1		2.45	1.85	18,519
	#3	Epoxy Resin-2		3.85	2.91	29,101
	#4	Phenol Resin		3.50	2.65	26,455
	#5	Carbon Black	1333-86-4	0.11	0.08	794
		Subtotal		71.21	53.82	538,217
External Plating	#1	Tin	7440-31-5	3.05	2.31	23,054
		Subtotal		3.05	2.31	23,054
			TOTAL PACKAGE WEIGHT	**132.30**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: SO3016 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type:	16-pin SOIC, Pb-free			**Package Code:**	SO3 016
Dimension:	7.5 mm x 10.3 mm			**Weight of Unit Package:**	490 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	26.46	5.41	54,051
		Subtotal		26.46	5.41	54,051
Bond Wire	#1	Gold	7440-57-5	0.12	0.02	238
		Subtotal		0.12	0.02	238
Die Attach	#1	Silver Flake	7440-22-4	1.48	0.30	3,019
	#2	Acrylic Resin		0.17	0.03	344
	#3	Polybutadiene derivative		0.079	0.02	162
	#4	Butadiene Copolymer		0.040	0.01	81
	#5	Acrylate		0.11	0.02	223
	#6	Epoxy Resin		0.050	0.01	101
	#7	Peroxide		0.020	0.00	41
	#8	Additive		0.040	0.01	81
		Subtotal		1.98	0.41	4,052
Leadframe	#1	Copper	7440-50-8	155.33	31.73	317,294
	#2	Iron	7439-89-6	1.50	0.31	3,058
	#3	Zinc	7440-66-6	0.10	0.02	197
	#4	Phosphorus	7723-14-0	0.016	0.00	33
		Subtotal		156.94	32.06	320,582
Internal Plating	#1	Silver	7440-22-4	4.02	0.82	8,220
		Subtotal		4.02	0.82	8,220
Mold Compound	#1	Silica Fused	60676-86-0	270.54	55.26	552,636
	#2	Epoxy Resin-1		4.19	0.85	8,549
	#3	Epoxy Resin-2		1.20	0.24	2,443
	#4	Epoxy Resin-3		11.96	2.44	24,426
	#5	Hardener		10.46	2.14	21,373
	#6	Carbon Black	1333-86-4	0.60	0.12	1,221
		Subtotal		298.94	61.06	610,648
External Plating	#1	Tin	7440-31-5	1.08	0.22	2,209
		Subtotal		1.08	0.22	2,209
			TOTAL PACKAGE WEIGHT	**489.54**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: SO3016 (Pb-free) Copper Wire

Company Name:	Spansion, Inc.
Contact Name and Address:	product.sustainability@spansion.com

Package Type:	16-pin SOIC, Pb-free			**Package Code:**	SO3 016
Dimension:	7.5 mm x 10.3 mm			**Weight of Unit Package:**	490 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	26.46	5.41	54,057
		Subtotal		26.46	5.41	54,057
Bond Wire	#1	Copper	7440-50-8	0.054	0.01	111
		Subtotal		0.054	0.01	111
Die Attach	#1	Silver Flake	7440-22-4	1.48	0.30	3,019
	#2	Acrylic Resin		0.17	0.03	344
	#3	Polybutadiene derivative		0.079	0.02	162
	#4	Butadiene Copolymer		0.040	0.01	81
	#5	Acrylate		0.11	0.02	223
	#6	Epoxy Resin		0.050	0.01	101
	#7	Peroxide		0.020	0.00	41
	#8	Additive		0.040	0.01	81
		Subtotal		1.98	0.41	4,053
Leadframe	#1	Copper	7440-50-8	155.33	31.73	317,334
	#2	Iron	7439-89-6	1.50	0.31	3,058
	#3	Zinc	7440-66-6	0.10	0.02	197
	#4	Phosphorus	7723-14-0	0.016	0.00	33
		Subtotal		156.94	32.06	320,623
Internal Plating	#1	Silver	7440-22-4	4.02	0.82	8,221
		Subtotal		4.02	0.82	8,221
Mold Compound	#1	Silica Fused	60676-86-0	270.54	55.27	552,707
	#2	Epoxy Resin-1		4.19	0.86	8,550
	#3	Epoxy Resin-2		1.20	0.24	2,443
	#4	Epoxy Resin-3		11.96	2.44	24,429
	#5	Hardener		10.46	2.14	21,375
	#6	Carbon Black	1333-86-4	0.60	0.12	1,221
		Subtotal		298.94	61.07	610,726
External Plating	#1	Tin	7440-31-5	1.08	0.22	2,209
		Subtotal		1.08	0.22	2,209
			TOTAL PACKAGE WEIGHT	**489.48**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: SO 044 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type: 44-pin SO, Pb-free | **Package Code:** SO 044
Dimension: 28.2 mm x 13.3 mm | **Weight of Unit Package:** 1,773 mg
RoHS: Compliant | **MSL:** 3 | **Temperature Rating:** 260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	14.36	0.81	8,099
		Subtotal		14.36	0.81	8,099
Bond Wire	#1	Gold	7440-57-5	0.71	0.04	400
		Subtotal		0.71	0.04	400
Die Attach	#1	Copper	7440-50-8	0.083	0.00	47
	#2	Epoxy Resin		0.23	0.01	127
	#3	Silver	7440-22-4	1.20	0.07	675
		Subtotal		1.50	0.08	849
Leadframe	#1	Copper	7440-50-8	287.65	16.23	162,274
	#2	Iron	7439-89-6	7.08	0.40	3,996
	#3	Zinc	7440-66-6	0.30	0.02	167
	#4	Phosphorus	7723-14-0	0.15	0.01	83
		Subtotal		295.17	16.65	166,520
Internal Plating	#1	Silver	7440-22-4	0.024	0.00	14
		Subtotal		0.024	0.00	14
Mold Compound	#1	SiO2 Filler	60676-86-0	1273.36	71.84	718,357
	#2	Carbon Black	133-86-4	4.36	0.25	2,457
	#3	Phenol Resin		72.60	4.10	40,955
	#4	Epoxy Resin		101.64	5.73	57,338
		Subtotal		1451.95	81.91	819,108
External Plating	#1	Tin	7440-31-5	8.88	0.50	5,011
		Subtotal		8.88	0.50	5,011
			TOTAL PACKAGE WEIGHT	**1772.60**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

SPANSION®

Material Declaration Data Sheet: UNE 008 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type: 8-pin USON, Pb-free
Package Code: UNE 008
Dimension: 5.0 mm x 6.0 mm
Weight of Unit Package: 48 mg
RoHS: Compliant
MSL: 3
Temperature Rating: 260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	3.58	7.41	74,117
		Subtotal		3.58	7.41	74,117
Bond Wire	#1	Gold	7440-57-5	0.069	0.14	1,438
		Subtotal		0.069	0.14	1,438
Die Attach	#1	Acrylate Resin		0.24	0.50	4,998
	#2	Heterocyclic Organic Compound		0.010	0.02	200
	#3	Treated Silica		0.010	0.02	200
	#4	Silver	7440-22-4	0.70	1.46	14,593
		Subtotal		0.97	2.00	19,990
Leadframe	#1	Copper	7440-50-8	9.89	20.48	204,802
	#2	Chromium	7440-47-3	0.025	0.05	516
	#3	Tin	7440-31-5	0.025	0.05	516
	#4	Zinc	7440-66-6	0.022	0.05	454
		Subtotal		9.96	20.63	206,288
Internal Plating	#1	Silver	7440-22-4	0.20	0.42	4,210
		Subtotal		0.20	0.42	4,210
Mold Compound	#1	Silica Fused	60676-86-0	27.53	57.01	570,069
	#2	Epoxy Resin		1.43	2.96	29,606
	#3	Phenol Resin		1.43	2.96	29,606
	#4	Carbon Black	1333-86-4	0.030	0.06	630
		Subtotal		30.42	62.99	629,911
External Plating	#1	Tin	7440-31-5	3.09	6.40	64,046
		Subtotal		3.09	6.40	64,046
			TOTAL PACKAGE WEIGHT	**48.29**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: WNF 008 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type:	8-pin WSON, Pb-free			**Package Code:**	WNF 008
Dimension:	6.0 mm x 8.0 mm			**Weight of Unit Package:**	127 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	9.04	7.10	70,962
		Subtotal		9.04	7.10	70,962
Bond Wire	#1	Gold	7440-57-5	0.19	0.15	1,524
		Subtotal		0.19	0.15	1,524
Die Attach	#1	Acrylate Monomer		0.24	0.19	1,875
	#2	Acrylate oligomer		0.18	0.14	1,406
	#3	Bismaleimide resin		0.06	0.05	469
	#4	Epoxy resin		0.01	0.01	94
	#5	Silver	7440-22-4	1.90	1.49	14,905
		Subtotal		2.39	1.87	18,748
Leadframe	#1	Copper	7440-50-8	17.62	13.83	138,294
	#2	Iron	7439-89-6	0.40	0.32	3,160
	#3	Phosphorus	7723-14-0	0.01	0.00	50
	#4	Zinc	7440-66-6	0.02	0.02	196
		Subtotal		18.05	14.17	141,699
Internal Plating	#1	Silver	7440-22-4	0.37	0.29	2,892
		Subtotal		0.37	0.29	2,892
Mold Compound	#1	Silica Fused	60676-86-0	83.26	65.36	653,560
	#2	Epoxy Resin		4.32	3.39	33,942
	#3	Phenol Resin		4.32	3.39	33,942
	#4	Carbon Black	1333-86-4	0.09	0.07	722
		Subtotal		92.00	72.22	722,166
External Plating	#1	Tin	7440-31-5	5.35	4.20	42,008
		Subtotal		5.35	4.20	42,008
			TOTAL PACKAGE WEIGHT	**127.39**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: SSO 056 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type:	56-pin SSOP, Pb-free			**Package Code:**	SSO 056
Dimension:	23.7 mm x 13.3 mm			**Weight of Unit Package:**	963 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	58.03	6.03	60,281
		Subtotal		58.03	6.03	60,281
Bond Wire	#1	Gold	7440-57-5	0.79	0.08	824
		Subtotal		0.79	0.08	824
Die Attach	#1	Copper	7440-50-8	0.52	0.05	543
	#2	Epoxy Resin		1.43	0.15	1,482
	#3	Silver	7440-22-4	7.56	0.79	7,854
		Subtotal		9.51	0.99	9,879
Leadframe	#1	Copper	7440-50-8	200.21	20.80	207,970
	#2	Iron	7439-89-6	4.93	0.51	5,122
	#3	Zinc	7440-66-6	0.21	0.02	213
	#4	Phosphorus	7723-14-0	0.10	0.01	107
		Subtotal		205.45	21.34	213,412
Internal Plating	#1	Silver	7440-22-4	0.34	0.03	349
		Subtotal		0.34	0.03	349
Mold Compound	#1	SiO2 Filler	60676-86-0	593.14	61.61	616,139
	#2	Bismuth	7440-69-9	0.34	0.04	354
	#3	Carbon Black	1333-86-4	2.04	0.21	2,122
	#4	Phosphoric Catalyst		3.75	0.39	3,891
	#5	Epoxy		81.72	8.49	84,887
		Subtotal		680.99	70.74	707,392
External Plating	#1	Tin	7440-31-5	7.57	0.79	7,863
		Subtotal		7.57	0.79	7,863
			TOTAL PACKAGE WEIGHT	**962.67**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: PL 032 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type: 32-pin PLCC, Pb-free **Package Code:** PL 032
Dimension: 18.4 mm x 11.9 mm **Weight of Unit Package:** 1129 mg
RoHS: Compliant **MSL:** 3 **Temperature Rating:** 260°C

Package Chemistry Substances Analysis Table

Description	Chemicals Present		CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	10.60	0.94	9,386
		Subtotal		10.60	0.94	9,386
Bond Wire	#1	Gold	7440-57-5	1.20	0.11	1,063
		Subtotal		1.20	0.11	1,063
Die Attach	#1	Silver	7440-22-4	3.47	0.31	3,068
	#2	Acrylic Resin		0.36	0.03	319
	#3	Polybutadiene derivative		0.23	0.02	199
	#4	Epoxy Resin	25928-94-3	0.14	0.01	120
	#5	Misc		0.32	0.03	279
		Subtotal		4.50	0.40	3,985
Leadframe	#1	Copper	7440-50-8	332.45	29.44	294,378
	#2	Silver	7440-22-4	4.28	0.38	3,790
	#3	Zirconium	7440-67-7	0.30	0.03	266
		Subtotal		337.03	29.84	298,434
Mold Compound	#1	SiO2 Filler	60676-86-0	660.63	58.50	584,971
	#2	Epoxy Resin	25928-94-3	37.75	3.34	33,427
	#3	Phenol Resin		37.75	3.34	33,427
	#4	Epoxy, Cresol Novolac	29690-82-2	15.10	1.34	13,371
	#5	Carbon Black	1333-86-4	3.78	0.33	3,343
		Subtotal		755.00	66.85	668,538
External Plating	#1	Tin	7440-31-5	21.00	1.86	18,595
		Subtotal		21.00	1.86	18,595
			TOTAL PACKAGE WEIGHT	**1129.33**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: PQR 080 (Pb-free) Gold Wire

Company Name: Spansion, Inc.

Contact Name and Address: product.sustainability@spansion.com

Package Type: 80-pin PQFP, Pb-free **Package Code:** PQR 080

Dimension: 20 mm x 14 mm **Weight of Unit Package:** 1,209 mg

RoHS: Compliant **MSL:** 3 **Temperature Rating:** 260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	16.25	1.34	13,442
		Subtotal		16.25	1.34	13,442
Bond Wire	#1	Gold	7440-57-5	1.96	0.16	1,618
		Subtotal		1.96	0.16	1,618
Die Attach	#1	Anhydride		0.42	0.03	343
	#2	Epoxy Resin		0.83	0.07	687
	#3	Silver	7440-22-4	2.91	0.24	2,405
		Subtotal		4.15	0.34	3,435
Leadframe	#1	Silicon	7440-21-3	1.40	0.12	1,157
	#2	Nickel	7440-02-0	6.45	0.53	5,337
	#3	Magnesium	7439-95-4	0.32	0.03	267
	#4	Copper	7440-50-8	206.84	17.12	171,155
		Subtotal		215.01	17.79	177,916
Internal Plating	#1	Silver	7440-22-4	0.77	0.06	635
		Subtotal		0.77	0.06	635
Mold Compound	#1	Silica Fused	60676-86-0	810.14	67.04	670,362
	#2	Epoxy Resin		142.97	11.83	118,299
		Subtotal		953.10	78.87	788,661
External Plating	#1	Tin	7440-31-5	17.27	1.43	14,293
		Subtotal		17.27	1.43	14,293
		TOTAL PACKAGE WEIGHT		**1208.50**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: TS 032 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type:	32-pin TSOP, Pb-free			**Package Code:**	TS 032
Dimension:	18.4 mm x 8.0 mm			**Weight of Unit Package:**	363 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description	Chemicals Present		CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	6.01	1.66	16,551
		Subtotal		6.01	1.66	16,551
Bond Wire	#1	Gold	7440-57-5	0.51	0.14	1,405
		Subtotal		0.51	0.14	1,405
Die Attach	#1	Copper	7440-50-8	0.022	0.01	60
	#2	Epoxy Resin		0.059	0.02	163
	#3	Silver	7440-22-4	0.31	0.09	862
		Subtotal		0.39	0.11	1,085
Leadframe	#1	Copper	7440-50-8	88.80	24.44	244,421
	#2	Iron	7439-89-6	2.19	0.60	6,020
	#3	Zinc	7440-66-6	0.091	0.03	251
	#4	Phosphorus	7723-14-0	0.046	0.01	125
		Subtotal		91.12	25.08	250,817
Internal Plating	#1	Silver	7440-22-4	0.082	0.02	226
		Subtotal		0.08	0.02	226
Mold Compound	#1	SiO2 Filler	60676-86-0	228.65	62.94	629,359
	#2	Bismuth	7440-69-9	0.13	0.04	361
	#3	Carbon Black	1333-86-4	0.79	0.22	2,168
	#4	Phosphoric Catalyst		1.44	0.40	3,974
	#5	Epoxy		31.50	8.67	86,708
		Subtotal		262.51	72.26	722,570
External Plating	#1	Tin	7440-31-5	2.67	0.73	7,345
		Subtotal		2.67	0.73	7,345
			TOTAL PACKAGE WEIGHT	**363.30**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: TS 040 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type: 40-pin TSOP, Pb-free **Package Code:** TS 040
Dimension: 18.4 mm x 10.0 mm **Weight of Unit Package:** 448 mg
RoHS: Compliant **MSL:** 3 **Temperature Rating:** 260°C

Package Chemistry Substances Analysis Table

Description	Chemicals Present		CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	11.01	2.46	24,613
		Subtotal		11.01	2.46	24,613
Bond Wire	#1	Gold	7440-57-5	0.58	0.13	1,305
		Subtotal		0.58	0.13	1,305
Die Attach	#1	Copper	7440-50-8	0.03	0.01	66
	#2	Epoxy Resin		0.08	0.02	180
	#3	Silver	7440-22-4	0.43	0.10	956
		Subtotal		0.54	0.12	1,203
Leadframe	#1	Copper	7440-50-8	82.67	18.47	184,748
	#2	Iron	7439-89-6	2.04	0.45	4,550
	#3	Zinc	7440-66-6	0.08	0.02	190
	#4	Phosphorus	7723-14-0	0.04	0.01	95
		Subtotal		84.84	18.96	189,582
Internal Plating	#1	Silver	7440-22-4	0.11	0.03	255
		Subtotal		0.11	0.03	255
Mold Compound	#1	SiO2 Filler	60676-86-0	307.25	68.66	686,596
	#2	Carbon Black	1333-86-4	0.69	0.16	1,552
	#3	Phosphoric Catalyst		1.74	0.39	3,879
	#4	Epoxy		37.49	8.38	83,788
		Subtotal		347.17	77.58	775,815
External Plating	#1	Tin	7440-31-5	3.23	0.72	7,228
		Subtotal		3.23	0.72	7,228
			TOTAL PACKAGE WEIGHT	**447.49**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: TS 048 (Pb-free) Gold Wire

Company Name:	Spansion, Inc.
Contact Name and Address:	product.sustainability@spansion.com

Package Type:	48-pin TSOP, Pb-free			**Package Code:**	TS 048
Dimension:	18.4 mm x 12.0 mm			**Weight of Unit Package:**	507 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description	Chemicals Present		CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	11.00	2.17	21,709
		Subtotal		11.00	2.17	21,709
Bond Wire	#1	Gold	7440-57-5	0.58	0.12	1,153
		Subtotal		0.58	0.12	1,153
Die Attach	#1	Copper	7440-50-8	0.03	0.01	57
	#2	Epoxy Resin		0.08	0.02	154
	#3	Silver	7440-22-4	0.41	0.08	818
		Subtotal		0.52	0.10	1,029
Leadframe	#1	Copper	7440-50-8	91.01	17.96	179,621
	#2	Iron	7439-89-6	2.24	0.44	4,424
	#3	Zinc	7440-66-6	0.09	0.02	184
	#4	Phosphorus	7723-14-0	0.05	0.01	92
		Subtotal		93.39	18.43	184,321
Internal Plating	#1	Silver	7440-22-4	0.14	0.03	266
		Subtotal		0.14	0.03	266
Mold Compound	#1	SiO2 Filler	60676-86-0	351.62	69.40	693,956
	#2	Carbon Black	1333-86-4	0.79	0.16	1,568
	#3	Phosphoric Catalyst		1.99	0.39	3,921
	#4	Epoxy		42.91	8.47	84,686
		Subtotal		397.32	78.41	784,131
External Plating	#1	Tin	7440-31-5	3.74	0.74	7,390
		Subtotal		3.74	0.74	7,390
			TOTAL PACKAGE WEIGHT	**506.70**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: TS 048 (Pb-free) Copper Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type: 48-pin TSOP, Pb-free — **Package Code:** TS 048
Dimension: 18.4 mm x 12.0 mm — **Weight of Unit Package:** 507 mg
RoHS: Compliant — **MSL:** 3 — **Temperature Rating:** 260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	11.00	2.17	21,709
		Subtotal		11.00	2.17	21,709
Bond Wire	#1	Copper	7440-50-8	0.58	0.12	1,153
		Subtotal		0.58	0.12	1,153
Die Attach	#1	Copper	7440-50-8	0.03	0.01	57
	#2	Epoxy Resin		0.08	0.02	154
	#3	Silver	7440-22-4	0.41	0.08	818
		Subtotal		0.52	0.10	1,029
Leadframe	#1	Copper	7440-50-8	91.01	17.96	179,621
	#2	Iron	7439-89-6	2.24	0.44	4,424
	#3	Zinc	7440-66-6	0.09	0.02	184
	#4	Phosphorus	7723-14-0	0.05	0.01	92
		Subtotal		93.39	18.43	184,321
Internal Plating	#1	Silver	7440-22-4	0.14	0.03	266
		Subtotal		0.14	0.03	266
Mold Compound	#1	SiO2 Filler	60676-86-0	351.62	69.40	693,956
	#2	Carbon Black	1333-86-4	0.79	0.16	1,568
	#3	Phosphoric Catalyst		1.99	0.39	3,921
	#4	Epoxy		42.91	8.47	84,686
		Subtotal		397.32	78.41	784,131
External Plating	#1	Tin	7440-31-5	3.74	0.74	7,390
		Subtotal		3.74	0.74	7,390
		TOTAL PACKAGE WEIGHT		**506.70**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: TS 056 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type:	56-pin TSOP, Pb-free			**Package Code:**	TS 056
Dimension:	18.4 mm x 14.0 mm			**Weight of Unit Package:**	601 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	91.42	15.21	152,106
		Subtotal		91.42	15.21	152,106
Bond Wire	#1	Gold	7440-57-5	0.13	0.02	221
		Subtotal		0.13	0.02	221
Die Attach	#1	Copper	7440-50-8	0.29	0.05	481
	#2	Epoxy Resin		0.79	0.13	1,311
	#3	Silver	7440-22-4	4.18	0.69	6,950
		Subtotal		5.25	0.87	8,742
Leadframe	#1	Copper	7440-50-8	133.04	22.14	221,361
	#2	Iron	7439-89-6	3.28	0.55	5,452
	#3	Zinc	7440-66-6	0.14	0.02	227
	#4	Phosphorus	7723-14-0	0.07	0.01	114
		Subtotal		136.52	22.72	227,154
Internal Plating	#1	Silver	7440-22-4	0.32	0.05	540
		Subtotal		0.32	0.05	540
Mold Compound	#1	SiO2 Filler	60676-86-0	320.25	53.29	532,863
	#2	Carbon Black	1333-86-4	0.72	0.12	1,204
	#3	Phosphoric Catalyst		1.81	0.30	3,011
	#4	Epoxy		39.08	6.50	65,027
		Subtotal		361.87	60.21	602,106
External Plating	#1	Tin	7440-31-5	5.49	0.91	9,132
		Subtotal		5.49	0.91	9,132
			TOTAL PACKAGE WEIGHT	**601.00**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: TS 056 (Pb-free) Copper Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type: 56-pin TSOP, Pb-free — **Package Code:** TS 056
Dimension: 18.4 mm x 14.0 mm — **Weight of Unit Package:** 601 mg
RoHS: Compliant — **MSL:** 3 — **Temperature Rating:** 260°C

Package Chemistry Substances Analysis Table

Description	Chemicals Present		CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	91.42	15.21	152,106
		Subtotal		91.42	15.21	152,106
Bond Wire	#1	Copper	7440-50-8	0.13	0.02	221
		Subtotal		0.13	0.02	221
Die Attach	#1	Copper	7440-50-8	0.29	0.05	481
	#2	Epoxy Resin		0.79	0.13	1,311
	#3	Silver	7440-22-4	4.18	0.69	6,950
		Subtotal		5.25	0.87	8,742
Leadframe	#1	Copper	7440-50-8	133.04	22.14	221,361
	#2	Iron	7439-89-6	3.28	0.55	5,452
	#3	Zinc	7440-66-6	0.14	0.02	227
	#4	Phosphorus	7723-14-0	0.07	0.01	114
		Subtotal		136.52	22.72	227,154
Internal Plating	#1	Silver	7440-22-4	0.32	0.05	540
		Subtotal		0.32	0.05	540
Mold Compound	#1	SiO2 Filler	60676-86-0	320.25	53.29	532,863
	#2	Carbon Black	1333-86-4	0.72	0.12	1,204
	#3	Phosphoric Catalyst		1.81	0.30	3,011
	#4	Epoxy		39.08	6.50	65,027
		Subtotal		361.87	60.21	602,106
External Plating	#1	Tin	7440-31-5	5.49	0.91	9,132
		Subtotal		5.49	0.91	9,132
			TOTAL PACKAGE WEIGHT	**601.00**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: ZSA 024 (Pb-free, Low Halogen) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type: 24-ball BGA, Pb-free, Low Halogen **Package Code:** ZSA 024
Dimension: 6 mm x 8 mm **Weight of Unit Package:** 88 mg
RoHS: Compliant **MSL:** 3 **Temperature Rating:** 260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	16.06	18.19	181,946
		Subtotal		16.06	18.19	181,946
Bond Wire	#1	Gold	7440-57-5	0.11	0.12	1,196
		Subtotal		0.11	0.12	1,196
Die Attach	#1	Epoxy Resin		3.79	4.30	42,952
	#2	Polytetrafluoroethylene	9002-84-0	0.34	0.38	3,836
	#3	Silica (fused)	60676-86-0	1.45	1.64	16,399
		Subtotal		5.58	6.32	63,187
Substrate	#1	Aluminum Hydroxide	21645-51-2	4.31	4.88	48,790
	#2	Copper	7440-50-8	1.12	1.27	12,671
	#3	Gold	7440-57-5	0.018	0.021	208
	#4	Nickel	7440-02-0	0.15	0.17	1,743
	#5	Epoxy Resin		9.00	10.19	101,947
	#6	SiO2 Glass Cloth	65997-17-3	8.45	9.57	95,704
		Subtotal		23.04	26.11	261,062
Mold Compound	#1	Silica (fused)	60676-86-0	33.57	38.04	380,448
	#2	Carbon Black	1333-86-4	0.10	0.11	1,119
	#3	Epoxy Resin		5.47	6.20	61,991
	#4	Phosphoric Organic Catalyst		0.12	0.13	1,343
	#5	Metal Oxides		0.24	0.27	2,686
		Subtotal		39.50	44.76	447,586
External Plating	#1	Tin	7440-31-5	3.83	4.34	43,447
	#2	Silver	7440-22-4	0.12	0.14	1,351
	#3	Copper	7440-50-8	0.020	0.023	225
		Subtotal		3.97	4.50	45,023
			TOTAL PACKAGE WEIGHT	**88.25**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: LAE 064 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type: 64-ball Fort-BGA, Pb-free
Package Code: LAE 064
Dimension: 9 mm x 9 mm
Weight of Unit Package: 189 mg
RoHS: Compliant
MSL: 3
Temperature Rating: 260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	4.14	2.20	21,956
		Subtotal		4.14	2.20	21,956
Bond Wire	#1	Gold	7440-57-5	0.46	0.24	2,424
		Subtotal		0.46	0.24	2,424
Die Attach	#1	Epoxy Resin		0.10	0.05	542
	#2	Polytetrafluoroethylene	9002-84-0	0.08	0.04	443
		Subtotal		0.19	0.10	985
Substrate	#1	BrominatedEpoxy Resin		3.69	1.96	19,551
	#2	Copper	7440-50-8	7.05	3.74	37,422
	#3	Gold	7440-57-5	0.04	0.02	222
	#4	Nickel	7440-02-0	0.23	0.12	1,208
	#5	Epoxy Resin		15.45	8.20	81,972
	#6	Silica	14808-60-7	3.12	1.65	16,543
	#7	SiO2 Glass Cloth	65997-17-3	13.61	7.22	72,187
		Subtotal		43.19	22.91	229,104
Mold Compound	#1	Silica (fused)	60676-86-0	77.14	40.92	409,207
	#2	Carbon Black	1333-86-4	0.17	0.09	925
	#3	Epoxy Resin		9.41	4.99	49,937
	#4	Phosphoric Organic Catalyst		0.44	0.23	2,312
		Subtotal		87.16	46.24	462,381
External Plating	#1	Tin	7440-31-5	51.51	27.32	273,240
	#2	Silver	7440-22-4	1.60	0.85	8,494
	#3	Copper	7440-50-8	0.27	0.14	1,416
		Subtotal		53.38	28.31	283,150
			TOTAL PACKAGE WEIGHT	**188.51**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

SPANSION®

Material Declaration Data Sheet: LAE 064 (Pb-free, Low Halogen) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type:	64-ball Fort-BGA, Pb-free, Low Halogen			**Package Code:**	LAE 064
Dimension:	9 mm x 9 mm			**Weight of Unit Package:**	192 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	4.14	2.16	21,558
		Subtotal		4.14	2.16	21,558
Bond Wire	#1	Gold	7440-57-5	0.46	0.24	2,380
		Subtotal		0.46	0.24	2,380
Die Attach	#1	Epoxy Resin		0.10	0.05	532
	#2	Polytetrafluoroethylene	9002-84-0	0.08	0.04	435
		Subtotal		0.19	0.10	967
Substrate	#1	Aluminum Hydroxide	21645-51-2	7.27	3.78	37,844
	#2	Copper	7440-50-8	8.10	4.22	42,187
	#3	Gold	7440-57-5	0.04	0.02	226
	#4	Nickel	7440-02-0	0.23	0.12	1,194
	#5	Epoxy Resin		16.78	8.74	87,390
	#6	SiO2 Glass Cloth	65997-17-3	14.25	7.42	74,233
		Subtotal		46.67	24.31	243,075
Mold Compound	#1	Silica (fused)	60676-86-0	77.14	40.18	401,792
	#2	Carbon Black	1333-86-4	0.17	0.09	908
	#3	Epoxy Resin		9.41	4.90	49,032
	#4	Phosphoric Organic Catalyst		0.44	0.23	2,270
		Subtotal		87.16	45.40	454,002
External Plating	#1	Tin	7440-31-5	51.51	26.83	268,288
	#2	Silver	7440-22-4	1.60	0.83	8,341
	#3	Copper	7440-50-8	0.27	0.14	1,390
		Subtotal		53.38	27.80	278,018
			TOTAL PACKAGE WEIGHT	**191.99**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: LAE 064 (Pb-free, Low Halogen) Copper Wire

Company Name:	Spansion, Inc.
Contact Name and Address:	product.sustainability@spansion.com

Package Type:	64-ball Fort-BGA, Pb-free, Low Halogen			**Package Code:**	LAE 064
Dimension:	9 mm x 9 mm			**Weight of Unit Package:**	190 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description	Chemicals Present		CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	7.65	4.03	40,326
		Subtotal		7.65	4.03	40,326
Bond Wire	#1	Copper	7440-50-8	0.19	0.10	1,018
	#2	Palladium (Pd)	7440-05-3	0.00	0.00	18
		Subtotal		0.20	0.10	1036
Die Attach	#1	Epoxy Resin		0.47	0.25	2,461
	#2	Polytetrafluoroethylene	9002-84-0	0.38	0.20	2,013
		Subtotal		0.85	0.45	4,474
Substrate	#1	Aluminum Hydroxide	21645-51-2	7.27	3.83	38,287
	#2	Copper	7440-50-8	8.10	4.27	42,681
	#3	Gold	7440-57-5	0.04	0.02	228
	#4	Nickel	7440-02-0	0.23	0.12	1,208
	#5	Epoxy Resin		16.78	8.84	88,413
	#6	SiO2 Glass Cloth	65997-17-3	14.25	7.51	75,102
		Subtotal		46.67	24.59	245,921
Mold Compound	#1	Silica (fused)	60676-86-0	68.87	36.29	362,924
	#2	Carbon Black	1333-86-4	0.20	0.11	1,067
	#3	Epoxy Resin		11.22	5.91	59,135
	#4	Phosphoric Organic Catalyst		0.24	0.13	1,281
	#5	Metal Oxides		0.49	0.26	2,562
		Subtotal		81.02	42.70	426970
External Plating	#1	Tin	7440-31-5	51.51	27.14	271,429
	#2	Silver	7440-22-4	1.60	0.84	8,438
	#3	Copper	7440-50-8	0.27	0.14	1,406
		Subtotal		53.38	28.13	281,273
			TOTAL PACKAGE WEIGHT	**189.77**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: VBH 064 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type:	64-ball Fort-BGA, Pb-free			**Package Code:**	VBH 064
Dimension:	11.6 mm x 8 mm			**Weight of Unit Package:**	140 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	17.17	12.27	122,713
		Subtotal		17.17	12.27	122,713
Bond Wire	#1	Gold	7440-57-5	0.76	0.54	5,449
		Subtotal		0.76	0.54	5,449
Die Attach	#1	Epoxy Resin		0.22	0.16	1,556
	#2	Polytetrafluoroethylene	9002-84-0	0.18	0.13	1,273
		Subtotal		0.40	0.28	2,830
Substrate	#1	BrominatedEpoxy Resin		2.81	2.01	20,114
	#2	Copper	7440-50-8	9.05	6.46	64,642
	#3	Gold	7440-57-5	0.07	0.05	522
	#4	Nickel	7440-02-0	0.34	0.24	2,408
	#5	Epoxy Resin		16.41	11.73	117,277
	#6	Silica	14808-60-7	2.38	1.70	17,019
	#7	SiO2 Glass Cloth	65997-17-3	10.39	7.43	74,267
		Subtotal		41.46	29.62	296,249
Mold Compound	#1	Silica (fused)	60676-86-0	61.56	43.99	439,893
	#2	Carbon Black	1333-86-4	0.14	0.10	994
	#3	Epoxy Resin		7.51	5.37	53,682
	#4	Phosphoric Organic Catalyst		0.35	0.25	2,485
		Subtotal		69.56	49.71	497,054
External Plating	#1	Tin	7440-31-5	10.22	7.31	73,056
	#2	Silver	7440-22-4	0.32	0.23	2,271
	#3	Copper	7440-50-8	0.05	0.04	379
		Subtotal		10.59	7.57	75,706
			TOTAL PACKAGE WEIGHT	**139.95**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: VBH 064 (Pb-free) Copper Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type: 64-ball Fort-BGA, Pb-free | **Package Code:** VBH 064
Dimension: 11.6 mm x 8 mm | **Weight of Unit Package:** 140 mg
RoHS: Compliant | **MSL:** 3 | **Temperature Rating:** 260°C

Package Chemistry Substances Analysis Table

Description	#	Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	17.17	12.31	123,117
		Subtotal		17.17	12.31	123,117
Bond Wire	#1	Copper	7440-50-8	0.30	0.21	2,142
	#2	Palladium	7440-05-3	0.005	0.004	37
		Subtotal		0.30	0.22	2179
Die Attach	#1	Epoxy Resin		0.22	0.16	1,561
	#2	Polytetrafluoroethylene	9002-84-0	0.18	0.13	1,277
		Subtotal		0.40	0.28	2,839
Substrate	#1	BrominatedEpoxy Resin		2.81	2.02	20,180
	#2	Copper	7440-50-8	9.05	6.49	64,854
	#3	Gold	7440-57-5	0.07	0.05	524
	#4	Nickel	7440-02-0	0.34	0.24	2,416
	#5	Epoxy Resin		16.41	11.77	117,663
	#6	Silica	14808-60-7	2.38	1.71	17,075
	#7	SiO2 Glass Cloth	65997-17-3	10.39	7.45	74,511
		Subtotal		41.46	29.72	297,223
Mold Compound	#1	Silica (fused)	60676-86-0	61.56	44.13	441,339
	#2	Carbon Black	1333-86-4	0.14	0.10	997
	#3	Epoxy Resin		7.51	5.39	53,858
	#4	Phosphoric Organic Catalyst		0.35	0.25	2,493
		Subtotal		69.56	49.87	498,688
External Plating	#1	Tin	7440-31-5	10.22	7.33	73,296
	#2	Silver	7440-22-4	0.32	0.23	2,279
	#3	Copper	7440-50-8	0.05	0.04	380
		Subtotal		10.59	7.60	75,955
			TOTAL PACKAGE WEIGHT	**139.49**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: LAA 064 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type: 64-ball Fort-BGA, Pb-free **Package Code:** LAA 064
Dimension: 13 mm x 11 mm **Weight of Unit Package:** 263 mg
RoHS: Compliant **MSL:** 3 **Temperature Rating:** 260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	8.59	3.26	32,609
		Subtotal		8.59	3.26	32,609
Bond Wire	#1	Gold	7440-57-5	0.57	0.22	2,163
		Subtotal		0.57	0.22	2,163
Die Attach	#1	Epoxy Resin		0.13	0.05	505
	#2	Polytetrafluoroethylene	9002-84-0	0.11	0.04	413
		Subtotal		0.24	0.09	918
Substrate	#1	BrominatedEpoxy Resin		5.56	2.11	21,099
	#2	Copper	7440-50-8	22.33	8.48	84,761
	#3	Gold	7440-57-5	0.34	0.13	1,289
	#4	Nickel	7440-02-0	1.57	0.59	5,943
	#5	Epoxy Resin		23.90	9.07	90,740
	#6	Silica	14808-60-7	4.70	1.79	17,853
	#7	SiO2 Glass Cloth	65997-17-3	20.52	7.79	77,906
		Subtotal		78.92	29.96	299,592
Mold Compound	#1	Silica (fused)	60676-86-0	114.61	43.51	435,090
	#2	Carbon Black	1333-86-4	0.26	0.10	983
	#3	Epoxy Resin		13.99	5.31	53,096
	#4	Phosphoric Organic Catalyst		0.65	0.25	2,458
		Subtotal		129.50	49.16	491,627
External Plating	#1	Tin	7440-31-5	44.00	16.70	167,033
	#2	Silver	7440-22-4	1.37	0.52	5,193
	#3	Copper	7440-50-8	0.23	0.09	865
		Subtotal		45.60	17.31	173,091
			TOTAL PACKAGE WEIGHT	**263.42**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: LAA 064 (Pb-free) Copper Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type:	64-ball Fort-BGA, Pb-free			**Package Code:**	LAA 064
Dimension:	13 mm x 11 mm			**Weight of Unit Package:**	263 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	8.59	3.26	32,639
		Subtotal		8.59	3.26	32,639
Bond Wire	#1	Copper	7440-50-8	0.32	0.12	1,233
	#2	Palladium	7440-05-3	0.01	0.00	21
		Subtotal		0.33	0.13	1,254
Die Attach	#1	Epoxy Resin		0.13	0.05	506
	#2	Polytetrafluoroethylene	9002-84-0	0.11	0.04	414
		Subtotal		0.24	0.09	919
Substrate	#1	BrominatedEpoxy Resin		5.56	2.11	21,119
	#2	Copper	7440-50-8	22.33	8.48	84,839
	#3	Gold	7440-57-5	0.34	0.13	1,290
	#4	Nickel	7440-02-0	1.57	0.59	5,949
	#5	Epoxy Resin		23.90	9.08	90,822
	#6	Silica	14808-60-7	4.70	1.79	17,870
	#7	SiO2 Glass Cloth	65997-17-3	20.52	7.80	77,977
		Subtotal		78.92	29.99	299,864
Mold Compound	#1	Silica (fused)	60676-86-0	114.61	43.55	435,486
	#2	Carbon Black	1333-86-4	0.26	0.10	984
	#3	Epoxy Resin		13.99	5.31	53,144
	#4	Phosphoric Organic Catalyst		0.65	0.25	2,460
		Subtotal		129.50	49.21	492,075
External Plating	#1	Tin	7440-31-5	44.00	16.72	167,185
	#2	Silver	7440-22-4	1.37	0.52	5,197
	#3	Copper	7440-50-8	0.23	0.09	866
		Subtotal		45.60	17.32	173,249
			TOTAL PACKAGE WEIGHT	**263.18**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: LAA 064 (Pb-free, Low Halogen) Copper Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type:	64-ball Fort-BGA, Pb-free, Low Halogen			**Package Code:**	LAA 064
Dimension:	13 mm x 11 mm			**Weight of Unit Package:**	269 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	7.65	2.85	28,491
		Subtotal		7.65	2.85	28,491
Bond Wire	#1	Copper	7440-50-8	0.31	0.12	1,162
	#2	Palladium	7440-05-3	0.004	0.002	15
		Subtotal		0.32	0.12	1,177
Die Attach	#1	Epoxy Resin		0.13	0.05	495
	#2	Polytetrafluoroethylene	9002-84-0	0.11	0.04	405
		Subtotal		0.24	0.09	901
Substrate	#1	Aluminum Hydroxide	21645-51-2	12.83	4.78	47,755
	#2	Copper	7440-50-8	26.14	9.73	97,311
	#3	Gold	7440-57-5	0.40	0.15	1,480
	#4	Nickel	7440-02-0	1.83	0.68	6,823
	#5	Epoxy resin		18.94	7.05	70,498
	#6	SiO2 Glass Cloth	65997-17-3	25.16	9.37	93,673
		Subtotal		85.29	31.75	317,540
Mold Compound	#1	Silica (fused)	60676-86-0	110.08	40.98	409,819
	#2	Carbon Black	1333-86-4	0.32	0.12	1,205
	#3	Epoxy Resin		17.94	6.68	66,776
	#4	Phosphoric Organic Catalyst		0.39	0.14	1,446
	#5	Metal Oxide		0.78	0.29	2,893
		Subtotal		129.50	48.21	482,140
External Plating	#1	Tin	7440-31-5	44.00	16.38	163,810
	#2	Silver	7440-22-4	1.37	0.51	5,093
	#3	Copper	7440-50-8	0.23	0.08	849
		Subtotal		45.60	16.98	169,751
			TOTAL PACKAGE WEIGHT	**268.60**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: VBG 080 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type:	80-ball Fort-BGA, Pb-free			**Package Code:**	VBG 080
Dimension:	11 mm x 8 mm			**Weight of Unit Package:**	134 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	17.17	12.86	128,615
		Subtotal		17.17	12.86	128,615
Bond Wire	#1	Gold	7440-57-5	0.60	0.45	4,505
		Subtotal		0.60	0.45	4,505
Die Attach	#1	Epoxy Resin		0.22	0.16	1,631
	#2	Polytetrafluoroethylene	9002-84-0	0.18	0.13	1,335
		Subtotal		0.40	0.30	2,966
Substrate	#1	BrominatedEpoxy Resin		2.67	2.00	19,991
	#2	Copper	7440-50-8	5.74	4.30	42,988
	#3	Gold	7440-57-5	0.17	0.13	1,282
	#4	Nickel	7440-02-0	0.79	0.59	5,912
	#5	Epoxy Resin		15.47	11.58	115,832
	#6	Silica	14808-60-7	2.26	1.69	16,915
	#7	SiO2 Glass Cloth	65997-17-3	9.86	7.38	73,812
		Subtotal		36.95	27.67	276,733
Mold Compound	#1	Silica (fused)	60676-86-0	57.67	43.19	431,879
	#2	Carbon Black	1333-86-4	0.13	0.10	976
	#3	Epoxy Resin		7.04	5.27	52,704
	#4	Phosphoric Organic Catalyst		0.33	0.24	2,440
		Subtotal		65.16	48.80	487,999
External Plating	#1	Tin	7440-31-5	12.78	9.57	95,712
	#2	Silver	7440-22-4	0.40	0.30	2,975
	#3	Copper	7440-50-8	0.07	0.05	496
		Subtotal		13.24	9.92	99,183
			TOTAL PACKAGE WEIGHT	**133.53**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: VBG 080 (Pb-free) Copper Wire

Company Name:	Spansion, Inc.
Contact Name and Address:	product.sustainability@spansion.com

Package Type:	80-ball Fort-BGA, Pb-free			**Package Code:**	VBG 080
Dimension:	11 mm x 8 mm			**Weight of Unit Package:**	133 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	17.17	12.90	128,993
		Subtotal		17.17	12.90	128,993
Bond Wire	#1	Copper	7440-50-8	0.21	0.16	1,551
	#2	Palladium	7440-05-3	0.004	0.003	27
		Subtotal		0.21	0.16	1,577
Die Attach	#1	Epoxy Resin		0.22	0.16	1,636
	#2	Polytetrafluoroethylene	9002-84-0	0.18	0.13	1,338
		Subtotal		0.40	0.30	2,974
Substrate	#1	BrominatedEpoxy Resin		2.67	2.00	20,050
	#2	Copper	7440-50-8	5.74	4.31	43,115
	#3	Gold	7440-57-5	0.17	0.13	1,286
	#4	Nickel	7440-02-0	0.79	0.59	5,930
	#5	Epoxy Resin		15.47	11.62	116,173
	#6	Silica	14808-60-7	2.26	1.70	16,965
	#7	SiO2 Glass Cloth	65997-17-3	9.86	7.40	74,029
		Subtotal		36.95	27.75	277,547
Mold Compound	#1	Silica (fused)	60676-86-0	57.67	43.31	433,149
	#2	Carbon Black	1333-86-4	0.13	0.10	979
	#3	Epoxy Resin		7.04	5.29	52,859
	#4	Phosphoric Organic Catalyst		0.33	0.24	2,447
		Subtotal		65.16	48.94	489,434
External Plating	#1	Tin	7440-31-5	12.78	9.60	95,993
	#2	Silver	7440-22-4	0.40	0.30	2,984
	#3	Copper	7440-50-8	0.07	0.05	497
		Subtotal		13.24	9.95	99,475
			TOTAL PACKAGE WEIGHT	**133.14**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: LAA 080 (Pb-free) Gold Wire

Company Name:	Spansion, Inc.
Contact Name and Address:	product.sustainability@spansion.com

Package Type:	80-ball Fort-BGA, Pb-free			**Package Code:**	LAA 080
Dimension:	13 mm x 11 mm			**Weight of Unit Package:**	269 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	16.36	6.08	60,814
		Subtotal		16.36	6.08	60,814
Bond Wire	#1	Gold	7440-57-5	0.77	0.29	2,876
		Subtotal		0.77	0.29	2,876
Die Attach	#1	Epoxy Resin		0.20	0.07	745
	#2	Polytetrafluoroethylene	9002-84-0	0.16	0.06	609
		Subtotal		0.36	0.14	1,354
Substrate	#1	BrominatedEpoxy Resin		5.92	2.20	21,990
	#2	Copper	7440-50-8	14.85	5.52	55,211
	#3	Gold	7440-57-5	0.23	0.08	839
	#4	Nickel	7440-02-0	1.04	0.39	3,871
	#5	Epoxy Resin		31.68	11.78	117,764
	#6	Silica	14808-60-7	5.01	1.86	18,607
	#7	SiO2 Glass Cloth	65997-17-3	21.84	8.12	81,193
		Subtotal		80.56	29.95	299,475
Mold Compound	#1	Silica (fused)	60676-86-0	92.23	34.29	342,882
	#2	Carbon Black	1333-86-4	0.21	0.08	775
	#3	Epoxy Resin		11.26	4.18	41,843
	#4	Phosphoric Organic Catalyst		0.52	0.19	1,937
		Subtotal		104.22	38.74	387,437
External Plating	#1	Tin	7440-31-5	64.39	23.94	239,361
	#2	Silver	7440-22-4	2.00	0.74	7,441
	#3	Copper	7440-50-8	0.33	0.12	1,240
		Subtotal		66.72	24.80	248,043
			TOTAL PACKAGE WEIGHT	**268.99**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: FBB 048 (Pb-free) Gold Wire

Company Name:	Spansion, Inc.
Contact Name and Address:	product.sustainability@spansion.com

Package Type:	48-ball FBGA, Pb-free			**Package Code:**	FBB 048
Dimension:	6.0 mm x 9.0 mm			**Weight of Unit Package:**	98 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	15.77	16.10	161,027
		Subtotal		15.77	16.10	161,027
Bond Wire	#1	Gold	7440-57-5	0.46	0.47	4,656
		Subtotal		0.46	0.47	4,656
Die Attach	#1	Epoxy Resin		0.67	0.68	6,841
	#2	Silica (fused)	68611-44-9	0.17	0.17	1,710
		Subtotal		0.84	0.86	8,552
Substrate	#1	BrominatedEpoxy Resin		3.11	3.18	31,766
	#2	Copper	7440-50-8	2.13	2.17	21,729
	#3	Gold	7440-57-5	0.025	0.03	253
	#4	Nickel	7440-02-0	0.11	0.12	1,166
	#5	Epoxy Resin		10.11	10.32	103,223
	#6	Silica	14808-60-7	2.63	2.69	26,879
	#7	SiO2 Glass Cloth	65997-17-3	11.49	11.73	117,290
		Subtotal		29.60	30.23	302,306
Mold Compound	#1	Silica (fused)	60676-86-0	40.94	41.80	418,039
	#2	Carbon Black	1333-86-4	0.093	0.09	945
	#3	Epoxy Resin		5.00	5.10	51,015
	#4	Phosphoric Organic Catalyst		0.23	0.24	2,362
		Subtotal		46.26	47.24	472,361
External Plating	#1	Tin	7440-31-5	4.83	4.93	49,311
	#2	Silver	7440-22-4	0.15	0.15	1,533
	#3	Copper	7440-50-8	0.025	0.03	255
		Subtotal		5.00	5.11	51,099
			TOTAL PACKAGE WEIGHT	**97.93**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: VBK 048 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type:	48-ball FBGA, Pb-free			**Package Code:**	VBK 048
Dimension:	8.15 mm x 6.15 mm			**Weight of Unit Package:**	84 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	9.66	11.49	114,865
		Subtotal		9.66	11.49	114,865
Bond Wire	#1	Gold	7440-57-5	0.52	0.62	6,199
		Subtotal		0.52	0.62	6,199
Die Attach	#1	Epoxy Resin		0.15	0.18	1,809
	#2	Polytetrafluoroethylene	9002-84-0	0.12	0.15	1,480
		Subtotal		0.28	0.33	3,289
Substrate	#1	BrominatedEpoxy Resin		1.52	1.81	18,084
	#2	Copper	7440-50-8	10.91	12.98	129,807
	#3	Gold	7440-57-5	0.05	0.06	621
	#4	Nickel	7440-02-0	0.24	0.29	2,865
	#5	Epoxy Resin		9.05	10.77	107,650
	#6	Silica	14808-60-7	1.29	1.53	15,302
	#7	SiO2 Glass Cloth	65997-17-3	5.61	6.68	66,773
		Subtotal		28.68	34.11	341,104
Mold Compound	#1	Silica (fused)	60676-86-0	32.74	38.94	389,422
	#2	Carbon Black	1333-86-4	0.07	0.09	880
	#3	Epoxy Resin		4.00	4.75	47,523
	#4	Phosphoric Organic Catalyst		0.18	0.22	2,200
		Subtotal		36.99	44.00	440,025
Solder ball	#1	Tin	7440-31-5	7.67	9.12	91,210
	#2	Silver	7440-22-4	0.24	0.28	2,836
	#3	Copper	7440-50-8	0.04	0.05	473
		Subtotal		7.95	9.45	94,518
			TOTAL PACKAGE WEIGHT	**84.07**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: VBK 048 (Pb-free) Copper Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type:	48-ball FBGA, Pb-free			**Package Code:**	VBK 048
Dimension:	8.15 mm x 6.15 mm			**Weight of Unit Package:**	84 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	9.66	11.52	115,212
		Subtotal		9.66	11.52	115,212
Bond Wire	#1	Copper	7440-50-8	0.25	0.30	3,008
	#2	Palladium	7440-05-3	0.00	0.01	52
		Subtotal		0.26	0.31	3,060
Die Attach	#1	Epoxy Resin		0.15	0.18	1,814
	#2	Polytetrafluoroethylene	9002-84-0	0.12	0.15	1,484
		Subtotal		0.28	0.33	3,299
Substrate	#1	Brominated Epoxy Resin		1.52	1.81	18,139
	#2	Copper	7440-50-8	10.91	13.02	130,199
	#3	Gold	7440-57-5	0.05	0.06	623
	#4	Nickel	7440-02-0	0.24	0.29	2,874
	#5	Epoxy Resin		9.05	10.80	107,975
	#6	Silica	14808-60-7	1.29	1.53	15,348
	#7	SiO2 Glass Cloth	65997-17-3	5.61	6.70	66,975
		Subtotal		28.68	34.21	342,134
Mold Compound	#1	Silica (fused)	60676-86-0	32.75	39.07	390,721
	#2	Carbon Black	1333-86-4	0.07	0.09	883
	#3	Epoxy Resin		4.00	4.77	47,681
	#4	Phosphoric Organic Catalyst		0.19	0.22	2,207
		Subtotal		37.01	44.15	441,492
Solder ball	#1	Tin	7440-31-5	7.67	9.15	91,485
	#2	Silver	7440-22-4	0.24	0.28	2,844
	#3	Copper	7440-50-8	0.04	0.05	474
		Subtotal		7.95	9.48	94,803
			TOTAL PACKAGE WEIGHT	**83.82**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

SPANSION®

Material Declaration Data Sheet: VBK 048 (Pb-free, Low Halogen) Copper Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type: 48-ball FBGA, Pb-free — **Package Code:** VBK 048
Dimension: 8.15 mm x 6.15 mm — **Weight of Unit Package:** 81 mg
RoHS: Compliant — **MSL:** 3 — **Temperature Rating:** 260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	6.94	8.58	85,810
		Subtotal		6.94	8.58	85,810
Bond Wire	#1	Copper	7440-50-8	0.37	0.45	4,533
	#2	Palladium	7440-05-3	0.006	0.008	78
		Subtotal		0.37	0.46	4,612
Die Attach	#1	Epoxy Resin		0.13	0.16	1,586
	#2	Polytetrafluoroethylene	9002-84-0	0.10	0.13	1,298
		Subtotal		0.23	0.29	2,884
Substrate	#1	Aluminium Hydroxide	21645-51-2	3.00	3.71	37,053
	#2	Copper	7440-50-8	8.25	10.19	101,930
	#3	Gold	7440-57-5	0.04	0.05	488
	#4	Nickel	7440-02-0	0.18	0.22	2,250
	#5	Epoxy resin	9003-36-5	9.60	11.86	118,634
	#6	SiO2 Glass Cloth	65997-17-3	5.88	7.27	72,681
		Subtotal		26.94	33.30	333,036
Mold Compound	#1	Silica (fused)	60676-86-0	32.69	40.41	404,113
	#2	Carbon Black	1333-86-4	0.10	0.12	1,189
	#3	Epoxy Resin		5.33	6.58	65,847
	#4	Phosphoric Organic Catalyst		0.12	0.14	1,426
	#5	Metal Oxides		0.23	0.29	2,853
		Subtotal		38.46	47.54	475,427
External Plating	#1	Tin	7440-31-5	7.67	9.48	94,794
	#2	Silver	7440-22-4	0.24	0.29	2,947
	#3	Copper	7440-50-8	0.04	0.05	491
		Subtotal		7.95	9.82	98,232
			TOTAL PACKAGE WEIGHT	**80.89**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: VBN 048 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type: 48-ball FBGA, Pb-free **Package Code:** VBN 048
Dimension: 10 mm x 6 mm **Weight of Unit Package:** 98 mg
RoHS: Compliant **MSL:** 3 **Temperature Rating:** 260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	12.48	12.70	126,965
		Subtotal		12.48	12.70	126,965
Bond Wire	#1	Gold	7440-57-5	0.45	0.45	4,548
		Subtotal		0.45	0.45	4,548
Die Attach	#1	Epoxy Resin		0.18	0.19	1,874
	#2	Polytetrafluoroethylene	9002-84-0	0.15	0.15	1,533
		Subtotal		0.33	0.34	3,407
Substrate	#1	BrominatedEpoxy Resin		1.82	1.85	18,513
	#2	Copper	7440-50-8	12.10	12.30	123,039
	#3	Gold	7440-57-5	0.19	0.19	1,908
	#4	Nickel	7440-02-0	0.87	0.88	8,799
	#5	Epoxy Resin		10.33	10.51	105,123
	#6	Silica	14808-60-7	1.54	1.57	15,665
	#7	SiO2 Glass Cloth	65997-17-3	6.72	6.84	68,355
		Subtotal		33.56	34.14	341,403
Mold Compound	#1	Silica (fused)	60676-86-0	38.53	39.19	391,922
	#2	Carbon Black	1333-86-4	0.09	0.09	886
	#3	Epoxy Resin		4.70	4.78	47,828
	#4	Phosphoric Organic Catalyst		0.22	0.22	2,214
		Subtotal		43.54	44.28	442,849
External Plating	#1	Tin	7440-31-5	7.67	7.80	77,999
	#2	Silver	7440-22-4	0.24	0.24	2,425
	#3	Copper	7440-50-8	0.04	0.04	404
		Subtotal		7.95	8.08	80,828
			TOTAL PACKAGE WEIGHT	**98.31**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: FBE 063 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type:	63-ball FBGA, Pb-free		**Package Code:**	FBE 063
Dimension:	11 mm x 12 mm		**Weight of Unit Package:**	239 mg
RoHS:	Compliant	**MSL:** 3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description	#	Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	48.36	20.28	202,759
		Subtotal		48.36	20.28	202,759
Bond Wire	#1	Gold	7440-57-5	0.69	0.29	2,894
		Subtotal		0.69	0.29	2,894
Die Attach	#1	Epoxy Resin		0.28	0.12	1,186
	#2	Polytetrafluoroethylene	9002-84-0	0.23	0.10	970
		Subtotal		0.51	0.22	2,156
Substrate	#1	Brominated Epoxy Resin		8.01	3.36	33,576
	#2	Copper	7440-50-8	6.77	2.84	28,365
	#3	Gold	7440-57-5	0.072	0.03	300
	#4	Nickel	7440-02-0	0.33	0.14	1,383
	#5	Epoxy Resin		26.05	10.92	109,214
	#6	Silica	14808-60-7	6.78	2.84	28,410
	#7	SiO2 Glass Cloth	65997-17-3	29.57	12.40	123,972
		Subtotal		77.57	32.52	325,220
Mold Compound	#1	Silica (fused)	60676-86-0	92.75	38.89	388,900
	#2	Carbon Black	1333-86-4	0.21	0.09	879
	#3	Epoxy Resin		11.32	4.75	47,459
	#4	Phosphoric Organic Catalyst		0.52	0.22	2,197
		Subtotal		104.81	43.94	439,435
External Plating	#1	Tin	7440-31-5	6.34	2.66	26,574
	#2	Silver	7440-22-4	0.20	0.08	826
	#3	Copper	7440-50-8	0.033	0.01	138
		Subtotal		6.57	2.75	27,537
			TOTAL PACKAGE WEIGHT	**238.51**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: VDD 064 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type: 64-ball FBGA, Pb-free **Package Code:** VDD 064
Dimension: 8 mm x 9.2 mm **Weight of Unit Package:** 110 mg
RoHS: Compliant **MSL:** 3 **Temperature Rating:** 260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	19.03	17.33	173,294
		Subtotal		19.03	17.33	173,294
Bond Wire	#1	Gold	7440-57-5	0.64	0.58	5,809
		Subtotal		0.64	0.58	5,809
Die Attach	#1	Epoxy Resin		0.22	0.20	1,969
	#2	Polytetrafluoroethylene	9002-84-0	0.18	0.16	1,611
		Subtotal		0.39	0.36	3,580
Substrate	#1	BrominatedEpoxy Resin		2.23	2.03	20,335
	#2	Copper	7440-50-8	8.92	8.13	81,270
	#3	Gold	7440-57-5	0.05	0.05	470
	#4	Nickel	7440-02-0	0.28	0.26	2,560
	#5	Epoxy Resin		11.10	10.11	101,059
	#6	Silica	14808-60-7	1.89	1.72	17,207
	#7	SiO2 Glass Cloth	65997-17-3	8.24	7.51	75,083
		Subtotal		32.71	29.80	297,983
Mold Compound	#1	Silica (fused)	60676-86-0	44.59	40.61	406,119
	#2	Carbon Black	1333-86-4	0.10	0.09	918
	#3	Epoxy Resin		5.44	4.96	49,560
	#4	Phosphoric Organic Catalyst		0.25	0.23	2,294
		Subtotal		50.38	45.89	458,892
External Plating	#1	Tin	7440-31-5	6.52	5.94	59,385
	#2	Silver	7440-22-4	0.08	0.07	725
	#3	Copper	7440-50-8	0.03	0.03	302
	#4	Nickel	7440-02-0	0.003	0.003	30
		Subtotal		6.64	6.04	60,443
			TOTAL PACKAGE WEIGHT	**109.79**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: VDD 064 (Pb-free) Copper Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type: 64-ball FBGA, Pb-free **Package Code:** VDD 064
Dimension: 8 mm x 9.2 mm **Weight of Unit Package:** 110 mg
RoHS: Compliant **MSL:** 3 **Temperature Rating:** 260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	19.03	17.39	173,945
		Subtotal		19.03	17.39	173,945
Bond Wire	#1	Copper	7440-57-5	0.22	0.20	1,970
	#2	Palladium	2023568	0.004	0.003	34
		Subtotal		0.22	0.20	2,004
Die Attach	#1	Epoxy Resin		0.22	0.20	2,013
	#2	Polytetrafluoroethylene	9002-84-0	0.18	0.16	1,647
		Subtotal		0.40	0.37	3,661
Substrate	#1	Brominated Epoxy Resin		2.23	2.04	20,411
	#2	Copper	7440-50-8	8.92	8.16	81,575
	#3	Gold	7440-57-5	0.05	0.05	471
	#4	Nickel	7440-02-0	0.28	0.26	2,569
	#5	Epoxy Resin		11.10	10.14	101,439
	#6	Silica	14808-60-7	1.89	1.73	17,271
	#7	SiO2 Glass Cloth	65997-17-3	8.24	7.54	75,365
		Subtotal		32.71	29.91	299,103
Mold Compound	#1	Silica (fused)	60676-86-0	44.59	40.76	407,646
	#2	Carbon Black	1333-86-4	0.10	0.09	921
	#3	Epoxy Resin		5.44	4.97	49,747
	#4	Phosphoric Organic Catalyst		0.25	0.23	2,303
		Subtotal		50.38	46.06	460,617
External Plating	#1	Tin	7440-31-5	6.52	5.96	59,609
	#2	Silver	7440-22-4	0.08	0.07	728
	#3	Copper	7440-50-8	0.03	0.03	303
	#4	Nickel	7440-02-0	0.003	0.003	30
		Subtotal		6.64	6.07	60,670
			TOTAL PACKAGE WEIGHT	**109.38**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: VBH 084 (Pb-free) Gold Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type:	84-ball FBGA, Pb-free			**Package Code:**	VBH 084
Dimension:	11.6 mm x 8 mm			**Weight of Unit Package:**	144 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	20.38	14.18	141,824
		Subtotal		20.38	14.18	141,824
Bond Wire	#1	Gold	7440-57-5	0.70	0.49	4,884
		Subtotal		0.70	0.49	4,884
Die Attach	#1	Epoxy Resin		0.23	0.16	1,615
	#2	Polytetrafluoroethylene	9002-84-0	0.19	0.13	1,322
		Subtotal		0.42	0.29	2,937
Substrate	#1	Brominated Epoxy Resin		2.81	1.96	19,592
	#2	Copper	7440-50-8	8.98	6.25	62,501
	#3	Gold	7440-57-5	0.19	0.13	1,346
	#4	Nickel	7440-02-0	0.89	0.62	6,208
	#5	Epoxy Resin		15.96	11.11	111,115
	#6	Silica	14808-60-7	2.38	1.66	16,578
	#7	SiO2 Glass Cloth	65997-17-3	10.39	7.23	72,339
		Subtotal		41.62	28.97	289,679
Mold Compound	#1	Silica (fused)	60676-86-0	58.99	41.05	410,544
	#2	Carbon Black	1333-86-4	0.13	0.09	928
	#3	Epoxy Resin		7.20	5.01	50,100
	#4	Phosphoric Organic Catalyst		0.33	0.23	2,319
		Subtotal		66.65	46.39	463,892
External Plating	#1	Tin	7440-31-5	13.42	9.34	93,397
	#2	Silver	7440-22-4	0.42	0.29	2,904
	#3	Copper	7440-50-8	0.07	0.05	484
		Subtotal		13.91	9.68	96,785
			TOTAL PACKAGE WEIGHT	**143.68**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: VBH 084 (Pb-free, Low Halogen) Gold Wire

Company Name:	Spansion, Inc.
Contact Name and Address:	product.sustainability@spansion.com

Package Type:	84-ball FBGA, Pb-free, Low Halogen			**Package Code:**	VBH 084
Dimension:	11.6 mm x 8 mm			**Weight of Unit Package:**	145 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description	Chemicals Present		CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	20.38	14.01	140,098
		Subtotal		20.38	14.01	140,098
Bond Wire	#1	Gold	7440-57-5	0.70	0.48	4,824
		Subtotal		0.70	0.48	4,824
Die Attach	#1	Epoxy Resin		0.23	0.16	1,596
	#2	Polytetrafluoroethylene	9002-84-0	0.19	0.13	1,306
		Subtotal		0.42	0.29	2,901
Substrate	#1	Aluminum Hydroxide	21645-51-2	5.55	3.82	38,154
	#2	Copper	7440-50-8	8.98	6.17	61,740
	#3	Gold	7440-57-5	0.19	0.13	1,330
	#4	Nickel	7440-02-0	0.89	0.61	6,133
	#5	Epoxy Resin		16.98	11.67	116,717
	#6	SiO2 Glass Cloth	65997-17-3	10.89	7.48	74,840
		Subtotal		43.48	29.89	298,912
Mold Compound	#1	Silica (fused)	60676-86-0	58.99	40.55	405,546
	#2	Carbon Black	1333-86-4	0.13	0.09	916
	#3	Epoxy Resin		7.20	4.95	49,490
	#4	Phosphoric Organic Catalyst		0.33	0.23	2,291
		Subtotal		66.65	45.82	458,244
External Plating	#1	Tin	7440-31-5	13.61	9.36	93,596
	#2	Silver	7440-22-4	0.14	0.10	950
	#3	Copper	7440-50-8	0.07	0.05	475
		Subtotal		13.82	9.50	95,021
			TOTAL PACKAGE WEIGHT	**145.45**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: VBH 084 (Pb-free) Copper Wire

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Type:	84-ball FBGA, Pb-free			**Package Code:**	VBH 084
Dimension:	11.6 mm x 8 mm			**Weight of Unit Package:**	143 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description	Chemicals Present		CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	20.38	14.22	142,172
		Subtotal		20.38	14.22	142,172
Bond Wire	#1	Copper	7440-50-8	0.34	0.24	2,400
	#2	Palladium	7440-05-3	0.01	0.00	42
		Subtotal		0.35	0.24	2,442
Die Attach	#1	Epoxy Resin		0.23	0.16	1,619
	#2	Polytetrafluoroethylene	9002-84-0	0.19	0.13	1,325
		Subtotal		0.42	0.29	2,944
Substrate	#1	Brominated Epoxy Resin		2.81	1.96	19,640
	#2	Copper	7440-50-8	8.98	6.27	62,654
	#3	Gold	7440-57-5	0.19	0.13	1,350
	#4	Nickel	7440-02-0	0.89	0.62	6,223
	#5	Epoxy Resin		15.96	11.14	111,388
	#6	Silica	14808-60-7	2.38	1.66	16,618
	#7	SiO2 Glass Cloth	65997-17-3	10.39	7.25	72,516
		Subtotal		41.62	29.04	290,390
Mold Compound	#1	Silica (fused)	60676-86-0	58.99	41.16	411,552
	#2	Carbon Black	1333-86-4	0.13	0.09	930
	#3	Epoxy Resin		7.20	5.02	50,223
	#4	Phosphoric Organic Catalyst		0.33	0.23	2,325
		Subtotal		66.65	46.50	465,030
External Plating	#1	Tin	7440-31-5	13.42	9.36	93,626
	#2	Silver	7440-22-4	0.42	0.29	2,911
	#3	Copper	7440-50-8	0.07	0.05	485
		Subtotal		13.91	9.70	97,022
			TOTAL PACKAGE WEIGHT	**143.33**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: VBH 084 (Pb-free, Low Halogen) Copper Wire

Company Name:	Spansion, Inc.
Contact Name and Address:	product.sustainability@spansion.com

Package Type:	84-ball FBGA, Pb-free, Low Halogen			**Package Code:**	VBH 084
Dimension:	11.6 mm x 8 mm			**Weight of Unit Package:**	145 mg
RoHS:	Compliant	**MSL:**	3	**Temperature Rating:**	260°C

Package Chemistry Substances Analysis Table

Description		Chemicals Present	CAS Number	Unit Weight (mg)	Unit Weight/ package (%)	Amount (ppm)
Silicon Die	#1	Silicon	7440-21-3	20.38	14.04	140,437
		Subtotal		20.38	14.04	140,437
Bond Wire	#1	Copper	7440-50-8	0.34	0.24	2,371
	#2	Palladium	7440-05-3	0.006	0.004	41
		Subtotal		0.35	0.24	2,412
Die Attach	#1	Epoxy Resin		0.23	0.16	1,600
	#2	Polytetrafluoroethylene	9002-84-0	0.19	0.13	1,309
		Subtotal		0.42	0.29	2,908
Substrate	#1	Aluminum Hydroxide	21645-51-2	5.55	3.82	38,246
	#2	Copper	7440-50-8	8.98	6.19	61,890
	#3	Gold	7440-57-5	0.19	0.13	1,333
	#4	Nickel	7440-02-0	0.89	0.61	6,148
	#5	Epoxy Resin		16.98	11.70	116,999
	#6	SiO2 Glass Cloth	65997-17-3	10.89	7.50	75,021
		Subtotal		43.48	29.96	299,637
Mold Compound	#1	Silica (fused)	60676-86-0	58.99	40.65	406,529
	#2	Carbon Black	1333-86-4	0.13	0.09	919
	#3	Epoxy Resin		7.20	4.96	49,610
	#4	Phosphoric Organic Catalyst		0.33	0.23	2,297
		Subtotal		66.65	45.94	459,354
External Plating	#1	Tin	7440-31-5	13.61	9.38	93,823
	#2	Silver	7440-22-4	0.14	0.10	953
	#3	Copper	7440-50-8	0.07	0.05	476
		Subtotal		13.82	9.53	95,251
			TOTAL PACKAGE WEIGHT	**145.10**	**100.00**	**1,000,000**

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Material Declaration Data Sheet: Known Good Wafer

Company Name: Spansion, Inc.
Contact Name and Address: product.sustainability@spansion.com

Package Name: Integrated Circuit, Flash Memory **Package Type:** Known Good Wafer
Thickness: ≥ 725 µm

Materials and Substances

Material /Substance	Concentration (ppm, µg/g)	Concentration (wt%)
Silicon	> 996,000	> 99.60
Silicon Nitride	< 2,600	< 0.26
Arsenic	< 4.0	< 0.00040
Aluminum	< 1,100	< 0.11

Note: In general, two decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.