

**PART INFORMATION**

Mfg Item Number	SPC5674FF3MVV3R
Mfg Item Name	TEPBGA PGE 516 27*27 P1

**SUPPLIER**

Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2018-05-03
Response Document ID	5193K11138D041A1.23
Contact Name	Freescale Semiconductor Inc
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Representative Title	EPP Customer Response
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**DECLARATION**

EU RoHS	No
Pb Free	No
HalogenFree	Yes
Plating Indicator	e0
EU RoHS Exemption(s)	

**MANUFACTURING**

Mfg Item Number	SPC5674FF3MVV3R
Mfg Item Name	TEPBGA PGE 516 27*27 P1
Version	ALL
Weight	4.634800
UoM	g
Unit Volume	EACH
J-STD-020 MSL Rating	3
Peak Processing Temperature	245 C
Max Time at Peak Temperature	30 seconds
Number of Processing Cycles	3

RoHS	
RoHS Directive	2011/65/EU
RoHS Definition	RoHS Definition: Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE) and quantity limit of 0.01% by mass (100 PPM) of homogeneous material of Cadmium
RoHS Legal Definition	Please indicate whether any homogeneous material (as defined by the RoHS Directive, EU 2011/65/EU and implemented by the laws of the European Union member states) of the part(s) identified on this form contains lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls and/or polybrominated diphenyl ethers (each a RoHS restricted substance) in excess of the applicable quantity limit identified below. If a homogeneous material within the part(s) contains a RoHS restricted substance in excess of an applicable quantity limit, please indicate below which, if any, RoHS exemption you believe may apply. If the part is an assembly with lower level components, the declaration shall encompass all such components. Supplier certifies that it gathered the information it provides in this form using appropriate methods to ensure its accuracy and that such information is true and correct to the best of its knowledge and belief, as of the date that Supplier completes this form. Supplier acknowledges that Company will rely on this certification in determining the compliance of its products with European Union member state laws that implement the RoHS Directive. Company acknowledges that Supplier may have relied on information provided by others in completing this form, and that Supplier may not have independently verified such information. However, in situations where Supplier has not independently verified information provided by others, Supplier agrees that, at a minimum, its suppliers have provided certifications regarding their contributions to the part(s), and those certifications are at least as comprehensive as the certification in this paragraph. If the Company and the Supplier enter into a written agreement with respect to the identified part(s), the terms and conditions of that agreement, including any warranty rights and/or remedies provided as part of that agreement, will be the sole and exclusive source of the Suppliers liability and the Companys remedies for issues that arise regarding information the Supplier provides in this form. In the absence of such written agreement, the warranty rights and/or remedies of Suppliers Standard Terms and Conditions of Sale applicable to such part(s) shall apply.
RoHS Declaration	3 - Item(s) does not contain RoHS restricted substances per the definition above except for lead in solders and selected exemptions, if any
Supplier Acceptance	Accepted
Signature	Daniel Binyon
Exemption List Version	2012/51/EU
List of Freescale Accepted Exemptions	<p>6(a) : Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0.35% lead by weight</p> <p>6(b) : Lead as an alloying element in aluminium containing up to 0.4% lead by weight</p> <p>6(c) : Copper alloy containing up to 4% lead by weight</p> <p>7(a) : Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead)</p> <p>7(b) : Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission, and network management for telecommunications</p> <p>7(c)-I : Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound</p> <p>7(c)-II : Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher</p> <p>7(c)-III : Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC</p> <p>7(c)-IV : Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors</p> <p>15 : Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages</p>

MATERIAL COMPOSITION

Homogeneous Material	Weight	SubstanceClass	Substance	CAS	Exemption	SubstanceWeight	UoM	SubPart PPM	SubPart%	ARTICLEPPM	ARTICLE%
Epoxy Die Attach	0.01						g				
Epoxy Die Attach		Solvents, additives, and other materials	1,3,5-Triazine-2,4-diamine, 6-[2-(2-methyl-1H-imidazol-1-yl)ethyl]	38668-46-1		0.00008451	g	8451	0.8451	18	0.0018
Epoxy Die Attach		Plastics/polymers	Phenolic Polymer Resin, Epikote 155	9003-36-5		0.00129579	g	129579	12.9579	279	0.0279
Epoxy Die Attach		Plastics/polymers	4,4-Dihydroxydiphenyl	92-88-6		0.00008451	g	8451	0.8451	18	0.0018
Epoxy Die Attach		Metals	Silver, metal	7440-22-4		0.00853519	g	853519	85.3519	1841	0.1841
Solder Balls - Low Lead	0.6876						g				
Solder Balls - Low Lead		Lead/Lead Compounds	Lead	7439-92-1		0.247536	g	360000	36	53408	5.3408
Solder Balls - Low Lead		Metals	Silver, metal	7440-22-4		0.013752	g	20000	2	2967	0.2967
Solder Balls - Low Lead		Metals	Tin, metal	7440-31-5		0.426312	g	620000	62	91980	9.198
Die Encapsulant, Halogen-free	1.8139						g				
Die Encapsulant, Halogen-free		Plastics/polymers	Other Epoxy resins	-		0.108834	g	60000	6	23481	2.3481
Die Encapsulant, Halogen-free		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.018139	g	10000	1	3913	0.3913
Die Encapsulant, Halogen-free		Solvents, additives, and other materials	Other inorganic compounds	-		0.028278	g	20000	2	7827	0.7827
Die Encapsulant, Halogen-free		Plastics/polymers	Other phenolic resins	-		0.000985	g	50000	5	19558	1.9558
Die Encapsulant, Halogen-free		Glass	Silica, vitreous	60676-86-0		1.559954	g	860000	86	335586	33.5586
Organic Substrate, Halogen-free	2.0583						g				
Organic Substrate, Halogen-free		Solvents, additives, and other materials	Other acrylates	-		0.02786561	g	13441	1.3441	5869	0.5869
Organic Substrate, Halogen-free		Metals	Aluminum Oxides (Al2O3)	1344-29-1		0.109897	g	53374	5.3374	23703	2.3703
Organic Substrate, Halogen-free		Metals	Barium	7440-39-3		0.02487044	g	12083	1.2083	5366	0.5366
Organic Substrate, Halogen-free		Metals	Copper, metal	7440-50-8		1.3638258	g	662480	66.248	294205	29.4205
Organic Substrate, Halogen-free		Plastics/polymers	2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)bisoxirane	1675-54-3		0.00553477	g	2689	0.2689	1194	0.1194
Organic Substrate, Halogen-free		Metals	Gold, metal	7440-57-5		0.00274166	g	1332	0.1332	591	0.0591
Organic Substrate, Halogen-free		Nickel (external applications only)	Nickel	7440-02-0		0.01894459	g	9204	0.9204	4087	0.4087
Organic Substrate, Halogen-free		Solvents, additives, and other materials	Other organic Silicon Compounds	-		0.0007554	g	367	0.0367	162	0.0162
Organic Substrate, Halogen-free		Glass	Fibrous-glass-wool	65997-17-3		0.23672508	g	115010	11.501	51075	5.1075
Organic Substrate, Halogen-free		Glass	Silicon dioxide	7631-86-9		0.1361418	g	65657	6.5657	29158	2.9158
Organic Substrate, Halogen-free		Solvents, additives, and other materials	Proprietary Material-Other miscellaneous substances.	-		0.02822547	g	13713	1.3713	6089	0.6089
Organic Substrate, Halogen-free		Plastics/polymers	Other Non-halogenated Epoxy resins	-		0.1042529	g	50650	5.065	22493	2.2493
Bonding Wire, P/Cu	0.025						g				
Bonding Wire, P/Cu		Metals	Copper, metal	7440-50-8		0.024525	g	981000	98.1	5291	0.5291
Bonding Wire, P/Cu		Metals	Gold, metal	7440-57-5		0.000025	g	1000	0.1	5	0.0005
Bonding Wire, P/Cu		Metals	Palladium, metal	7440-05-3		0.00045	g	18000	1.8	97	0.0097
Silicon Semiconductor Die	0.04						g				
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%)	-		0.0008	g	20000	2	172	0.0172
Silicon Semiconductor Die		Glass	Silicon, doped	-		0.0392	g	980000	98	8457	0.8457

## LINKS

MCD LINK	
NXP website	<a href="http://www.nxp.com">http://www.nxp.com</a>
GENERAL ENVIRONMENTAL COMPLIANCE LINKS	
RoHS signed letter	<a href="http://www.nxp.com/files/corporate/doc/support_info/NXP-ROHS-DECLARATION.pdf">http://www.nxp.com/files/corporate/doc/support_info/NXP-ROHS-DECLARATION.pdf</a>
China RoHS	<a href="http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization/china-rohs:ENV_CHINA_ROHS_STRATEGY">http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization/china-rohs:ENV_CHINA_ROHS_STRATEGY</a>
REACH signed letter	<a href="http://www.nxp.com/files/corporate/doc/support_info/NXP-REACH-STATEMENT.pdf">http://www.nxp.com/files/corporate/doc/support_info/NXP-REACH-STATEMENT.pdf</a>
ELV signed letter	<a href="http://www.nxp.com/files/corporate/doc/support_info/NXP-ELV-STATEMENT.pdf">http://www.nxp.com/files/corporate/doc/support_info/NXP-ELV-STATEMENT.pdf</a>
Conflict Minerals statement	<a href="http://www.nxp.com/files/corporate/doc/support_info/NXP-STATEMENT-CONFLICT-MINERALS.pdf">http://www.nxp.com/files/corporate/doc/support_info/NXP-STATEMENT-CONFLICT-MINERALS.pdf</a>
NXP ENVIRONMENTAL INFORMATION	
Environmental Compliance website	<a href="http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization:ABUENVPRFPRDX">http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization:ABUENVPRFPRDX</a>
FAQ	<a href="http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization/eco-product-faqs:ENVIRON_FAQ">http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization/eco-product-faqs:ENVIRON_FAQ</a>
Technical Service Request	<a href="http://www.nxp.com/support/sales-and-support:SUPPORTHOME">http://www.nxp.com/support/sales-and-support:SUPPORTHOME</a>
LINKS TO BLANK IPC1752 FORMS	
Blank IPC1752 v1.1 Form	<a href="http://www.NXP.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v1.1_MCD_Template.pdf">http://www.NXP.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v1.1_MCD_Template.pdf</a>

IPC1752 XML LINKS

[http://www.freescale.com/mcdfs/SPC5674FF3M3R\\_IPC1752\\_v11.xml](http://www.freescale.com/mcdfs/SPC5674FF3M3R_IPC1752_v11.xml)

[http://www.freescale.com/mcdfs/SPC5674FF3M3R\\_IPC1752A.xml](http://www.freescale.com/mcdfs/SPC5674FF3M3R_IPC1752A.xml)