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**PART INFORMATION**

Mfg Item Number	MPC8349EVVALFB
Mfg Item Name	TBGA 672 35*35*1.5P1.0

**SUPPLIER**

Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2017-11-06
Response Document ID	5215K11016D013A1.42
Contact Name	Freescale Semiconductor Inc
Contact Title	Product Technical Support
Contact Phone	1-800-521-6274
Contact Email	support@freescale.com
Authorized Representative	Daniel Binyon
Representative Title	EPP Customer Response
Representative Phone	512-895-3406
Representative Email	eppanlst@freescale.com
URL for Additional Information	www.freescale.com

**DECLARATION**

EU RoHS	Yes
Pb Free	Yes
HalogenFree	Yes
Plating Indicator	e2
EU RoHS Exemption(s)	

**MANUFACTURING**

Mfg Item Number	MPC8349EVVALFB
Mfg Item Name	TBGA 672 35*35*1.5P1.0
Version	ALL
Weight	9.442800
UoM	g
Unit Volume	EACH
J-STD-020 MSL Rating	3
Peak Processing Temperature	260 C
Max Time at Peak Temperature	40 seconds
Number of Processing Cycles	3

<b>RoHS</b>	
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	1 - Item(s) do not contain RoHS restricted substances per the definition above
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	0.045										
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		0.0003803	g	8451	0.8451	40	0.004
Epoxy Die Attach		Plastics/polymers	Phenolic Polymer Resin, Epikote 155	9003-36-5		0.00563106	g	129579	12.9579	617	0.617
Epoxy Die Attach		Plastics/polymers	4,4'-Dihydroxydiphenyl	92-88-6		0.0003803	g	8451	0.8451	40	0.004
Epoxy Die Attach		Metals	Silver, metal	7440-22-4		0.03840634	g	853519	85.3519	4067	0.4067
Solder Balls - Pb Free, Sn/Ag	0.7422										
Solder Balls - Pb Free, Sn/Ag		Metals	Aluminum, metal	7429-90-5		0.00002375	g	32	0.0032	2	0.0002
Solder Balls - Pb Free, Sn/Ag		Antimony/Antimony Compounds	Antimony (metallic)	7440-36-0		0.00002778	g	125	0.0125	9	0.0009
Solder Balls - Pb Free, Sn/Ag		Arsenic/Arsenic Compounds	Arsenic	7440-39-2		0.00005567	g	75	0.0075	5	0.0005
Solder Balls - Pb Free, Sn/Ag		Bismuth/Bismuth Compounds	Bismuth	7440-69-9		0.00113053	g	188	0.0188	14	0.0014
Solder Balls - Pb Free, Sn/Ag		Cadmium/Cadmium Compounds	Cadmium	7440-43-9		0.00009665	g	13	0.0013	1	0.0001
Solder Balls - Pb Free, Sn/Ag		Metals	Copper, metal	7440-50-8		0.00004678	g	63	0.0063	4	0.0004
Solder Balls - Pb Free, Sn/Ag		Metals	Gold, metal	7440-57-5		0.00004678	g	63	0.0063	4	0.0004
Solder Balls - Pb Free, Sn/Ag		Metals	Indium, metal	7440-74-6		0.00004678	g	63	0.0063	4	0.0004
Solder Balls - Pb Free, Sn/Ag		Sulfur	Sulfur	7704-34-9		0.000052	g	7	0.0007	0	0
Solder Balls - Pb Free, Sn/Ag		Solvents, additives, and other materials	Phosphorus, elemental (not containing red allotope)	7723-14-0		0.00004678	g	63	0.0063	4	0.0004
Solder Balls - Pb Free, Sn/Ag		Metals	Iron, metal	7439-89-6		0.00008164	g	110	0.011	8	0.0008
Solder Balls - Pb Free, Sn/Ag		Lead/Lead Compounds	Lead	7439-92-1		0.00023231	g	313	0.0313	24	0.0024
Solder Balls - Pb Free, Sn/Ag		Nickel (external applications only)	Nickel	7440-02-0		0.00002375	g	32	0.0032	2	0.0002
Solder Balls - Pb Free, Sn/Ag		Metals	Silver, metal	7440-22-4		0.02597848	g	35002	3.5002	2751	0.2751
Solder Balls - Pb Free, Sn/Ag		Metals	Tin, metal	7440-31-5		0.715361	g	963832	96.3832	75756	7.5756
Solder Balls - Pb Free, Sn/Ag		Metals	Zinc, metal	7440-66-6		0.0000141	g	19	0.0019	1	0.0001
Die Encapsulant, Halogen-free	0.4062										
Die Encapsulant, Halogen-free		Plastics/polymers	Other Epoxy resins	-		0.024372	g	60000	6	2581	0.2581
Die Encapsulant, Halogen-free		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.004062	g	10000	1	430	0.043
Die Encapsulant, Halogen-free		Solvents, additives, and other materials	Other inorganic compounds	-		0.008124	g	20000	2	860	0.086
Die Encapsulant, Halogen-free		Plastics/polymers	Other phenolic resins	-		0.02031	g	50000	5	2150	0.215
Die Encapsulant, Halogen-free		Glass	Silica, vitreous	60676-86-0		0.349332	g	860000	86	36994	3.6994
Organic Substrate	8.175										
Organic Substrate		Solvents, additives, and other materials	Other Aromatic hydrocarbon compounds	-		0.00322095	g	394	0.0394	341	0.0341
Organic Substrate		Metals	Other barium compounds	-		0.0025179	g	308	0.0308	266	0.0266
Organic Substrate		Metals	Copper, metal	7440-50-8		7.36113785	g	900445	90.0445	779573	7.79573
Organic Substrate		Metals	Cupric oxide	1317-39-0		0.21481448	g	26277	2.6277	22749	2.2749
Organic Substrate		Metals	Other copper compounds	-		0.00005723	g	7	0.0007	6	0.0006
Organic Substrate		Metals	Gold, metal	7440-57-5		0.0111998	g	137	0.0137	118	0.0118
Organic Substrate		Solvents, additives, and other materials	Other inorganic compounds	-		0.010137	g	1240	0.124	1073	0.1073
Organic Substrate		Nickel (external applications only)	Nickel	7440-02-0		0.01034955	g	1266	0.1266	1096	0.1096
Organic Substrate		Solvents, additives, and other materials	Other organic compounds	-		0.01283475	g	1570	0.157	1359	0.1359
Organic Substrate		Solvents, additives, and other materials	Other organic Silicon Compounds	-		0.1926023	g	23667	2.3667	20402	2.0402
Organic Substrate		Metals	Zirconium, metal	7440-67-7		0.02845718	g	3481	0.3481	3013	0.3013
Organic Substrate		Plastics/polymers	Proprietary Material-Other acrylic/epoxy resin mixture	-		0.2566623	g	31396	3.1396	27180	2.718
Organic Substrate		Plastics/polymers	Polyethylene terephthalate	25038-59-9		0.0032046	g	392	0.0392	339	0.0339
Organic Substrate		Plastics/polymers	Other non-halogenated polymers	-		0.00724305	g	886	0.0886	767	0.0767
Organic Substrate		Plastics/polymers	Poly[1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-indole]2,2'-diyl]-1,4-phenylene]	32197-39-0		0.07058295	g	8634	0.8634	7474	0.7474
Bonding Wire, PdCu	0.0444										
Bonding Wire, PdCu		Metals	Copper, metal	7440-50-8		0.04334994	g	976350	97.635	4590	0.459
Bonding Wire, PdCu		Metals	Gold, metal	7440-57-5		0.0000753	g	1696	0.1696	7	0.0007
Bonding Wire, PdCu		Metals	Palladium, metal	7440-05-3		0.00097476	g	21954	2.1954	103	0.0103
Silicon Semiconductor Die	0.03										
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%)	-		0.0006	g	20000	2	63	0.0063
Silicon Semiconductor Die		Glass	Silicon, doped	-		0.0294	g	980000	98	3113	0.3113



## 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>

