

PART INFORMATION	
Mfg Item Number	SPC5673FF3MVR3
Mfg Item Name	TEPBGA 416 27*27*1.25 P1
SUPPLIER	
Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2018-05-03
Response Document ID	5252K10908D048A1.19
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	SPC5673FF3MVR3
Mfg Item Name	TEPBGA 416 27*27*1.25 P1
Version	ALL
Weight	2.854950
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

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	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	6(a) : Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0.35% lead by weight 6(b) : Lead as an alloying element in aluminium containing up to 0.4% lead by weight 6(c) : Copper alloy containing up to 4% lead by weight 7(a) : Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead) 7(b) : Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission, and network management for telecommunications 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 7(c)-II : Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher 7(c)-III : Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC 7(c)-IV : Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors 15 : Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages

MATERIAL COMPOSITION

Homogeneous Material	Weight	SubstanceClass	Substance	CAS	Exemption	SubstanceWeight	UoM	SubPart PPM	SubPart%		ARTICLEPPM	ARTICLE%
Epoxy Die Attach	0.0174						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		0.00014705	g	8451	0.8451		51	0.0051
Epoxy Die Attach		Plastics/polymers	Phenolic Polymer Resin, Epikote 155	9003-36-5		0.00225467	g	129579	12.9579		789	0.0789
Epoxy Die Attach		Plastics/polymers	4,4'-Dihydroxydiphenyl	92-88-6		0.00014705	g	8451	0.8451		51	0.0051
Epoxy Die Attach		Metals	Silver, metal	7440-22-4		0.01485123	g	853519	85.3519		5201	0.5201
Solder Balls - Pb Free, SnAg	0.3187						g					
Solder Balls - Pb Free, SnAg		Metals	Silver, metal	7440-22-4		0.0111545	g	35000	3.5		3907	0.3907
Solder Balls - Pb Free, SnAg		Metals	Tin, metal	7440-31-5		0.3075455	g	965000	96.5		107723	10.7723
Die Encapsulant, Halogen-free	0.9633						g					
Die Encapsulant, Halogen-free		Plastics/polymers	Other Epoxy resins	-		0.057798	g	60000	6		20244	2.0244
Die Encapsulant, Halogen-free		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.009633	g	10000	1		3374	0.3374
Die Encapsulant, Halogen-free		Solvents, additives, and other materials	Other inorganic compounds.	-		0.019266	g	20000	2		6749	0.6749
Die Encapsulant, Halogen-free		Plastics/polymers	Other phenolic resins	-		0.048165	g	50000	5		16870	1.687
Die Encapsulant, Halogen-free		Glass	Silica, vitreous	60676-86-0		0.828438	g	860000	86		290176	29.0176
Organic Substrate	1.5074						g					
Organic Substrate		Solvents, additives, and other materials	Other acrylates	-		0.02236188	g	14848	1.4848		7839	0.7839
Organic Substrate		Metals	Aluminum Oxides (Al2O3)	1344-29-1		0.08860346	g	58779	5.8779		31035	3.1035
Organic Substrate		Metals	Barium	7440-39-3		0.02011927	g	13347	1.3347		7047	0.7047
Organic Substrate		Metals	Copper, metal	7440-50-8		0.95305064	g	632248	63.2248		333838	33.3838
Organic Substrate		Plastics/polymers	2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)bisoxirane	1675-54-3		0.00363886	g	2414	0.2414		1274	0.1274
Organic Substrate		Metals	Gold, metal	7440-57-5		0.00145163	g	963	0.0963		508	0.0508
Organic Substrate		Nickel (external applications only)	Nickel	7440-02-0		0.01203357	g	7983	0.7983		4214	0.4214
Organic Substrate		Solvents, additives, and other materials	Other organic Silicon Compounds	-		0.0006105	g	405	0.0405		213	0.0213
Organic Substrate		Glass	Fibrous-glass-wool	65997-17-3		0.19092276	g	126657	12.6657		66874	6.6874
Organic Substrate		Glass	Silicon dioxide	7631-86-9		0.10899256	g	72305	7.2305		38176	3.8176
Organic Substrate		Solvents, additives, and other materials	Proprietary Material-Other miscellaneous substances.	-		0.02139151	g	14191	1.4191		7492	0.7492
Organic Substrate		Plastics/polymers	Other Non-halogenated Epoxy resins	-		0.08420336	g	55860	5.586		29493	2.9493
Bonding Wire, PtCu	0.0062						g					
Bonding Wire, PtCu		Metals	Copper, metal	7440-50-8		0.0060822	g	981000	98.1		2130	0.213
Bonding Wire, PtCu		Metals	Gold, metal	7440-57-5		0.0000062	g	1000	0.1		2	0.0002
Bonding Wire, PtCu		Metals	Palladium, metal	7440-05-3		0.0001116	g	18000	1.8		39	0.0039
Silicon Semiconductor Die	0.04195						g					
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%).	-		0.000839	g	20000	2		293	0.0293
Silicon Semiconductor Die		Glass	Silicon, doped	-		0.041111	g	980000	98		14399	1.4399

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

IPC1752 XML LINKS

http://www.freescale.com/mcds/SPC5673FF3MVR3_IPC1752_v11.xml

http://www.freescale.com/mcds/SPC5673FF3MVR3_IPC1752A.xml