

PART INFORMATION		
Mfg Item Number		P1017NSN5CFB
Mfg Item Name		TEPBGA 457 19SQ 1.9 0.8
SUPPLIER		
Company Name		Freescale Semiconductor Inc
Company Unique ID		14-141-7928
Response Date		2013-10-10
Response Document ID		007MK00073D054M1.1
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		P1017NSN5CFB
Mfg Item Name		TEPBGA 457 19SQ 1.9 0.8
Version		ALL
Weight		0.991100
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
Exemptions in this part	
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

SubPart	Weight	SubstanceClass	Substance	CAS	Exemption	SubstanceWeight	UoM	SubPart PPM	SubPart%	REACHPPM	REACH%
Epoxy Die Attach	0.0023						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		0.000019	g	8451	0.8451	19	0.0019
Epoxy Die Attach		Plastics/polymers	Phenolic Polymer Resin, Epikote 155	9003-36-5		0.000298	g	129579	12.9579	300	0.03
Epoxy Die Attach		Plastics/polymers	4,4'-Dihydroxydiphenyl	92-88-6		0.000019	g	8451	0.8451	19	0.0019
Epoxy Die Attach		Metals	Silver, metal	7440-22-4		0.001964	g	853519	85.3519	1981	0.1981
Solder Balls - Pb Free, SnAg	0.1176						g				
Solder Balls - Pb Free, SnAg		Metals	Aluminum, metal	7429-90-5		0.000004	g	32	0.0032	4	0.0004
Solder Balls - Pb Free, SnAg		Metals	Antimony, metal	7440-36-0		0.000015	g	125	0.0125	15	0.0015
Solder Balls - Pb Free, SnAg		Metals	Arsenic, metal	7440-39-2		0.000009	g	75	0.0075	9	0.0009
Solder Balls - Pb Free, SnAg		Metals	Bismuth, metal	7440-69-9		0.000022	g	189	0.0189	22	0.0022
Solder Balls - Pb Free, SnAg		Metals	Cadmium, metal	7440-43-9		0.000002	g	13	0.0013	2	0.0002
Solder Balls - Pb Free, SnAg		Metals	Copper, metal	7440-50-8		0.000007	g	63	0.0063	7	0.0007
Solder Balls - Pb Free, SnAg		Metals	Gold, metal	7440-57-5		0.000007	g	63	0.0063	7	0.0007
Solder Balls - Pb Free, SnAg		Metals	Indium, metal	7440-74-6		0.000007	g	63	0.0063	7	0.0007
Solder Balls - Pb Free, SnAg		Solvents, additives, and other materials	Sulfur	7704-34-9		0.000001	g	7	0.0007	1	0.0001
Solder Balls - Pb Free, SnAg		Solvents, additives, and other materials	Phosphorus	7723-14-0		0.000007	g	63	0.0063	7	0.0007
Solder Balls - Pb Free, SnAg		Metals	Iron, metal	7439-89-6		0.000015	g	125	0.0125	15	0.0015
Solder Balls - Pb Free, SnAg		Metals	Lead, metallic lead and lead alloys	7439-92-1		0.000037	g	313	0.0313	37	0.0037
Solder Balls - Pb Free, SnAg		Metals	Nickel, metal	7440-02-0		0.000004	g	32	0.0032	4	0.0004
Solder Balls - Pb Free, SnAg		Metals	Silver, metal	7440-22-4		0.004116	g	35002	3.5002	4152	0.4152
Solder Balls - Pb Free, SnAg		Metals	Tin, metal	7440-31-5		0.113345	g	963817	96.3817	114363	11.4363
Solder Balls - Pb Free, SnAg		Metals	Zinc, metal	7440-66-6		0.000002	g	19	0.0019	2	0.0002
Organic Substrate, Halogen-free	0.3605						g				
Organic Substrate, Halogen-free		Solvents, additives, and other materials	Other acrylates	-		0.004478	g	12421	1.2421	4518	0.4518
Organic Substrate, Halogen-free		Metals	Aluminum Oxides (Al2O3)	1344-28-1		0.018918	g	52478	5.2478	19087	1.9087
Organic Substrate, Halogen-free		Metals	Barium	7440-39-3		0.004025	g	11166	1.1166	4061	0.4061
Organic Substrate, Halogen-free		Metals	Copper, metal	7440-50-8		0.240882	g	668185	66.8185	243048	24.3048
Organic Substrate, Halogen-free		Plastics/polymers	2,2'-(1,1-methylethyldene)bis[4,1-phenyleneoxy(methylene)]bisoxirane	1675-54-3		0.000816	g	2264	0.2264	823	0.0823
Organic Substrate, Halogen-free		Metals	Gold, metal	7440-57-5		0.000574	g	1592	0.1592	579	0.0579
Organic Substrate, Halogen-free		Metals	Nickel, metal	7440-02-0		0.004759	g	13202	1.3202	4801	0.4801
Organic Substrate, Halogen-free		Solvents, additives, and other materials	Other organic Silicon Compounds	-		0.000122	g	339	0.0339	123	0.0123
Organic Substrate, Halogen-free		Glass	Fibrous-glass-wool	65997-17-3		0.040766	g	113081	11.3081	41132	4.1132
Organic Substrate, Halogen-free		Glass	Silicon dioxide	7631-86-9		0.023272	g	64555	6.4555	23480	2.348
Organic Substrate, Halogen-free		Solvents, additives, and other materials	Proprietary Material-Other miscellaneous substances.	-		0.004431	g	12292	1.2292	4470	0.447
Organic Substrate, Halogen-free		Plastics/polymers	Other Non-halogenated Epoxy resins	-		0.017457	g	48425	4.8425	17613	1.7613
Die Encapsulant	0.4857						g				
Die Encapsulant		Plastics/polymers	Other Epoxy resins	-		0.029142	g	60000	6	29403	2.9403
Die Encapsulant		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.004857	g	10000	1	4900	0.49
Die Encapsulant		Solvents, additives, and other materials	Other inorganic compounds.	-		0.009714	g	20000	2	9801	0.9801
Die Encapsulant		Plastics/polymers	Other phenolic resins	-		0.024285	g	50000	5	24503	2.4503
Die Encapsulant		Glass	Silica, vitreous	60676-86-0		0.417702	g	860000	86	421461	42.1461
Silicon Semiconductor Die	0.025						g				
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%).	-		0.0005	g	20000	2	504	0.0504
Silicon Semiconductor Die		Glass	Silicon, doped	-		0.0245	g	980000	98	24720	2.472
Bonding Wire, PdCu							g				
Bonding Wire, PdCu		Metals	Copper, metal	7440-50-8		0	g	976349	97.635	0	0
Bonding Wire, PdCu		Metals	Gold, metal	7440-57-5		0	g	1696	0.1696	0	0
Bonding Wire, PdCu		Metals	Palladium, metal	7440-05-3		0	g	21954	2.1954	0	0

LINKS	
MCD LINK	
Freescal website	<a href="http://www.freescal.com">http://www.freescal.com</a>
GENERAL ENVIRONMENTAL COMPLIANCE LINKS	
RoHS signed letter	<a href="http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_ROHS_Freescal_Response.pdf">http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_ROHS_Freescal_Response.pdf</a>
China RoHS	<a href="http://www.freescal.com/chinarohs">http://www.freescal.com/chinarohs</a>
REACH signed letter	<a href="http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_REACH_Freescal_Response.pdf">http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_REACH_Freescal_Response.pdf</a>
ELV signed letter	<a href="http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_ELV_Freescal_Reponse.pdf">http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_ELV_Freescal_Reponse.pdf</a>
Conflict Minerals statement	<a href="http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_CONFLICT_METAL_Freescal_Response.pdf">http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_CONFLICT_METAL_Freescal_Response.pdf</a>
FREESCALE ENVIRONMENTAL INFORMATION	
EPP website	<a href="http://www.freescal.com/epp">http://www.freescal.com/epp</a>
FAQ	<a href="http://www.freescal.com/webapp/sps/site/overview.jsp?code=ENVIRON_FAQ">http://www.freescal.com/webapp/sps/site/overview.jsp?code=ENVIRON_FAQ</a>
Technical Service Request	<a href="https://www.freescal.com/webapp/servicerequest.create_SR.framework?defaultCategory=Hardware Product Support&amp;defaultTopic=Environmentally Preferred Prod">https://www.freescal.com/webapp/servicerequest.create_SR.framework?defaultCategory=Hardware Product Support&amp;defaultTopic=Environmentally Preferred Prod</a>
LINKS TO BLANK IPC1752 FORMS	
Blank IPC1752 v0.9 Form	<a href="http://www.freescal.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v0.9_MCD_Template.pdf">http://www.freescal.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v0.9_MCD_Template.pdf</a>
Blank IPC1752 v1.1 Form	<a href="http://www.freescal.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v1.1_MCD_Template.pdf">http://www.freescal.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v1.1_MCD_Template.pdf</a>

IPC1752 XML LINKS

[http://www.freescale.com/mcds/P1017NSN5CFB\\_IPC1752\\_v09.xml](http://www.freescale.com/mcds/P1017NSN5CFB_IPC1752_v09.xml)

[http://www.freescale.com/mcds/P1017NSN5CFB\\_IPC1752\\_v11.xml](http://www.freescale.com/mcds/P1017NSN5CFB_IPC1752_v11.xml)

[http://www.freescale.com/mcds/P1017NSN5CFB\\_IPC1752A.xml](http://www.freescale.com/mcds/P1017NSN5CFB_IPC1752A.xml)