PART INFORMATION

Mfg Item Number	MCF5274LVF166
Mfg Item Name	MABGA-FW 196 15SQ0.8P1.0

SUPPLIER

Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2012-01-20
Response Document ID	5220K00119D032A1.28
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	No
Pb Free	No
HalogenFree	Yes
Plating Indicator	e0
EU RoHS Exemption(s)	

MANUFACTURING

Mfg Item Number	MCF5274LVF166
Mfg Item Name	MABGA-FW 196 15SQ0.8P1.0
Version	ALL
Weight	0.547250
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	2002/95/EC
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 2002/95/EC 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	2 - Item(s) contain RoHS restricted substances above the limits and is not under exemptions
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%
Die Encapsulant	0.2687						g					
Die Encapsulant		Metals	Aluminum, metal	7429-90-5		0.008302	g	30896	3.0896		15170	1.517
Die Encapsulant		Plastics/polymers	Proprietary Material-Other Epoxy resins	-		0.008302	g	30896	3.0896		15170	1.517
Die Encapsulant		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.00083	g	3090	0.309		1516	0.1516
Die Encapsulant		Solvents, additives, and other materials	Other organic phosphorous compounds	-		0.00083	g	3090	0.309		1516	0.1516
Die Encapsulant		Plastics/polymers	Proprietary Material-Other phenolic resins	-		0.01522	g	56642	5.6642		27811	2.7811
Die Encapsulant		Glass	Silica, vitreous	60676-86-0		0.235216	g	875386	87.5386		429825	42.9825
Solder Balls - Low Lead	0.1013						g					
Solder Balls - Low Lead		Metals	Lead, metallic lead and lead alloys	7439-92-1		0.036468	g	360000	36		66638	6.6638
Solder Balls - Low Lead		Metals	Silver, metal	7440-22-4		0.002026	g	20000	2		3702	0.3702
Solder Balls - Low Lead		Metals	Tin, metal	7440-31-5		0.062806	g	620000	62		114767	11.4767
Non-Conductive Epoxy/Adhesive	0.009						g					
Non-Conductive Epoxy/Adhesive		Plastics/polymers	Proprietary Material-Other Epoxy resins	-		0.000675	g	75000	7.5		1233	0.1233
Non-Conductive Epoxy/Adhesive		Plastics/polymers	Crosslinked acrylate polymer	25767-43-5		0.0018	g	200000	20		3289	0.3289
Non-Conductive Epoxy/Adhesive		Plastics/polymers	Other polymers	-		0.000675	g	75000	7.5		1233	0.1233
Non-Conductive Epoxy/Adhesive		Plastics/polymers	Proprietary Material-Other polymers	-		0.0018	g	200000	20		3289	0.3289
Non-Conductive Epoxy/Adhesive		Glass	Silica, vitreous	60676-86-0		0.00405	g	450000	45		7400	0.74
Bonding Wire	0.0017						g					
Bonding Wire		Metals	Gold, metal	7440-57-5		0.0017	g	1000000	100		3106	0.3106
Organic Substrate, Halogen-fre	0.15785						g					
Organic Substrate, Halogen-fre		Solvents, additives, and other materials	Other Aromatic hydrocarbon compounds	-		0.001219	g	7725	0.7725		2227	0.2227
Organic Substrate, Halogen-fre		Metals	Barium sulfate	7727-43-7		0.008778	g	55610	5.561		16040	1.604
Organic Substrate, Halogen-fre		Metals	Copper, metal	7440-50-8		0.055669	g	352668	35.2668		101725	10.1725
Organic Substrate, Halogen-fre		Metals	Gold, metal	7440-57-5		0.002226	g	14099	1.4099		4067	0.4067
Organic Substrate, Halogen-fre		Metals	Other nickel compounds	-		0.016995	g	107665	10.7665		31055	3.1055
Organic Substrate, Halogen-fre		Solvents, additives, and other materials	Other organic phosphorous compounds	-		0.019849	g	125749	12.5749		36270	3.627
Organic Substrate, Halogen-fre		Plastics/polymers	Other polymers	-		0.011924	g	75539	7.5539		21788	2.1788
Organic Substrate, Halogen-fre		Glass	Other silica compounds	-		0.04119	g	260945	26.0945		75267	7.5267
Silicon Semiconductor Die	0.0087						g					
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%)	-		0.000174	g	20000	2		317	0.0317
Silicon Semiconductor Die		Glass	Silicon, doped	-		0.008526	g	980000	98		15579	1.5579

LINKS	
MCD LINK	
Freescale website	http://www.freescale.com
GENERAL ENVIRONMENTAL COMPLIANCE LINKS	
RoHS signed letter	http://www.freescale.com/files/abstract/corporate/ehs_epp/ENV_ROHS_Freescale_Response.pdf
China RoHS	http://www.freescale.com/chinarohs
REACH signed letter	http://www.freescale.com/files/abstract/corporate/ehs_epp/ENV_REACH_Freescale_Response.pdf
ELV signed letter	http://www.freescale.com/files/abstract/corporate/ehs_epp/ENV_ELV_Freescale_Reponse.pdf
Conflict Minerals statement	http://www.freescale.com/files/abstract/corporate/ehs_epp/ENV_CONFLICT_METAL_Freescale_Response.pdf
FREESCALE ENVIRONMENTAL INFORMATION	
EPP website	http://www.freescale.com/epp
FAQ	http://www.freescale.com/webapp/sps/site/overview.jsp?code=ENVIRON_FAQ
Technical Service Request	https://www.freescale.com/webapp/servicerequest.create_SR.framework?defaultCategory=Hardware Product Support&defaultTopic=Environmentally Preferred Prod
LINKS TO BLANK IPC1752 FORMS	
Blank IPC1752 v0.9 Form	http://www.freescale.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v0.9_MCD_Template.pdf
Blank IPC1752 v1.1 Form	http://www.freescale.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v1.1_MCD_Template.pdf

IPC1752 XML LINKS

http://www.freescale.com/mcds/MCF5274LVF166_IPC1752_v09.xml

http://www.freescale.com/mcds/MCF5274LVF166_IPC1752_v11.xml

http://www.freescale.com/mcds/MCF5274LVF166_IPC1752A.xml