

<b>PART INFORMATION</b>	
Mfg Item Number	MC34671AEPR2
Mfg Item Name	QFN-D 8 EP 2*3*0.65P0.5
<b>SUPPLIER</b>	
Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2010-10-09
Response Document ID	6227K11243D006A1.5
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
<b>DECLARATION</b>	
EU RoHS	Yes
Pb Free	Yes
HalogenFree	Yes
Plating Indicator	e4
EU RoHS Exemption(s)	
<b>MANUFACTURING</b>	
Mfg Item Number	MC34671AEPR2
Mfg Item Name	QFN-D 8 EP 2*3*0.65P0.5
Version	ALL
Weight	0.009500
UoM	g
Unit Volume	EACH
J-STD-020 MSL Rating	1
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	<p>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.</p>
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
<p>List of Freescale Accepted Exemptions</p> <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. piezoelectric 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%
Bonding Wire	0.0001	Metals	Gold, metal and alloys	7440-57-5	0.0001	g	1000000	100		10526	1.0526
Bonding Wire						g					
Die Encapsulant	0.0057	Plastics/polymers	Proprietary Material-Other Epoxy resins	-	0.000171	g	30000	3		18000	1.8
Die Encapsulant		Solvents, additives, and other materials	Carbon Black	1333-86-4	0.0000171	g	3000	0.3		1800	0.18
Die Encapsulant		Plastics/polymers	Proprietary Material-Other phenolic resins	-	0.000171	g	30000	3		18000	1.8
Die Encapsulant		Glass	Silica, vitreous	60676-86-0	0.0053409	g	93700	93.7		562209	56.2209
Epoxy Die Attach	0.0002					g					
Epoxy Die Attach		Solvents, additives, and other materials	Other acrylates	-	0.00001	g	50000	5		1052	0.1052
Epoxy Die Attach		Metals	Silver, metal and alloys	7440-22-4	0.00017	g	850000	85		17894	1.7894
Epoxy Die Attach		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%)	-	0.00001	g	50000	5		1052	0.1052
Epoxy Die Attach		Solvents, additives, and other materials	Proprietary Material-Other Bismaleimides	-	0.00001	g	50000	5		1052	0.1052
Copper Lead Frame	0.0032					g					
Copper Lead Frame		Metals	Copper, metal and alloys	7440-50-8	0.00306432	g	957600	95.76		322560	32.256
Copper Lead Frame		Metals	Gold, metal and alloys	7440-57-5	0.00000448	g	150	0.015		50	0.005
Copper Lead Frame		Solvents, additives, and other materials	Silicon	7440-21-3	0.00001664	g	5200	0.52		1751	0.1751
Copper Lead Frame		Metals	Iron, metal and alloys	7439-89-6	0.0000064	g	200	0.02		67	0.0067
Copper Lead Frame		Lead/Lead Compounds	Lead	7439-92-1	0.00000003	g	10	0.001		3	0.0003
Copper Lead Frame		Metals	Magnesium, metal and alloys	7439-95-4	0.00000416	g	1300	0.13		437	0.0437
Copper Lead Frame		Metals	Manganese, metal and alloys	7439-96-5	0.00000013	g	40	0.004		13	0.0013
Copper Lead Frame		Nickel (external applications only)	Nickel	7440-02-0	0.00010976	g	34300	3.43		11553	1.1553
Copper Lead Frame		Metals	Palladium, metal and alloys	7440-05-3	0.0000032	g	1000	0.1		336	0.0336
Copper Lead Frame		Metals	Zinc, metal and alloys	7440-66-6	0.0000064	g	200	0.02		67	0.0067
Silicon Semiconductor Die	0.0003					g				631	0.0631
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%)	-	0.00006	g	20000	2		30947	3.0947
Silicon Semiconductor Die		Glass	Silicon, doped	-	0.000294	g	980000	98			

**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](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](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](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](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](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](https://www.freescale.com/webapp/servicerequest.create_SR.framework?defaultCategory=Hardware Product Support&defaultTopic=Environmentally Preferred Prod)**LINKS TO BLANK IPC1752 FORMS**Blank IPC1752 v1.1 Form [http://www.freescale.com/files/abstract/corporate/ehs\\_epp/IPC-1752-2\\_v1.1\\_MCD\\_Template.pdf](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/MC34671AEPR2\\_IPC1752\\_v11.xml](http://www.freescale.com/mcds/MC34671AEPR2_IPC1752_v11.xml)

[http://www.freescale.com/mcds/MC34671AEPR2\\_IPC1752A.xml](http://www.freescale.com/mcds/MC34671AEPR2_IPC1752A.xml)