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**URL** for Additional Information

 PART INFORMATION

 Mfg Item Number
 MCZ33793AEFR2

 Mfg Item Name
 SOIC16 3.9\*9.9\*1.75P1.27

SUPPLIER Freescale Semiconductor Inc Company Name Company Unique ID 14-141-7928 Response Date 2017-10-19 Response Document ID 0097K10949D395A1.11 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

DECLARATION

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

www.freescale.com

MANUFACTURING Mfg Item Number MCZ33793AEFR2 Mfg Item Name SOIC16 3.9\*9.9\*1.75P1.27 Version ALL Weight 0.144300 UoM 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



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 Su							
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							



lomogeneous Material	Weight				SubstanceWeight	UoM	SubPart PPM	SubPart%	ARTICLEPPM	ARTICLE%
ead Frame Plating	0.005					g				
ead Frame Plating		Lead/Lead Compounds	Lead	7439-92-1	0.000001	g	200	0.02	6	0.0006
ead Frame Plating		Metals	Tin, metal	7440-31-5	0.004999	g	999800	99.98	34643	3.4643
opper Lead Frame	0.0471					g				
opper Lead Frame		Metals	Copper, metal	7440-50-8	0.04540227	g	963955	96.3955	314638	31.4638
opper Lead Frame		Solvents, additives, and other materials	Phosphorus, elemental (not containing red allotrope)	7723-14-0	0.00003886	g	825	0.0825	269	0.0269
opper Lead Frame		Metals	Iron, metal	7439-89-6	0.00110685	g	23500	2.35	7670	0.767
opper Lead Frame		Lead/Lead Compounds	Lead	7439-92-1	0.00000801	g	170	0.017	55	0.0055
opper Lead Frame		Metals	Silver, metal	7440-22-4	0.000471	g	10000	1	3264	0.3264
opper Lead Frame		Metals	Tin, metal	7440-31-5	0.00001413	g	300	0.03	97	0.0097
opper Lead Frame		Metals	Zinc, metal	7440-66-6	0.00005888	g	1250	0.125	408	0.0408
oxy Die Attach	0.0014					g				
oxy Die Attach		Solvents, additives, and other materials	Proprietary Material-Other acrylates	-	0.00017486	g	124900	12.49	1211	0.1211
oxy Die Attach		Plastics/polymers	Proprietary Material-Other Epoxy resins	-	0.00003497	g	24980	2.498	242	0.0242
oxy Die Attach		Solvents, additives, and other materials	Other organic Silicon Compounds	-	0.00001679	g	11990	1.199	116	0.0116
oxy Die Attach		Metals	Silver, metal	7440-22-4	0.00109224	g	780176	78.0176	7569	0.7569
oxy Die Attach		Plastics/polymers	Proprietary Material-acrylonitrile/butadiene copolymer, carboxyl terminated	-	0.00008114	g	57954	5.7954	562	0.0562
licon Semiconductor Die	0.0033					g				
icon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%).	-	0.000066	g	20000	2	457	0.0457
icon Semiconductor Die		Glass	Silicon, doped	-	0.003234	g	980000	98	22411	2.2411
onding Wire, Copper	0.0002					g				
onding Wire, Copper		Metals	Copper, metal	7440-50-8	0.000194	g	970000	97	1344	0.1344
onding Wire, Copper		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%).	-	0.000006	g	30000	3	41	0.0041
e Encapsulant, Halogen-free	0.0873					g				
e Encapsulant, Halogen-free		Plastics/polymers	Epoxy resin, EPON Resin 8091	25928-94-3	0.004365	g	50000	5	30249	3.0249
Encapsulant, Halogen-free		Solvents, additives, and other materials	Carbon Black	1333-86-4	0.0004365	g	5000	0.5	3024	0.3024
e Encapsulant, Halogen-free		Solvents, additives, and other materials	Silicone modified epoxy resin	218163-11-2	0.004365	g	50000	5	30249	3.0249
e Encapsulant, Halogen-free		Plastics/polymers	Phenolic Resin	125133-38-2	0.004365	g	50000	5	30249	3.0249
Encapsulant, Halogen-free		Glass	Silicon dioxide	7631-86-9	0.0082935	g	95000	9.5	57474	5.7474
e Encapsulant, Halogen-free		Glass	Silica, vitreous	60676-86-0	0.065475	a	750000	75	453752	45.3752



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