

Company		DUNS#	URL for Additional Information
National Semiconductor		04-147-2986	http://www.national.com/quality/green/



Contact	Title	Phone	Email
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Part Number	MSL Rating	Peak Body Temp C	MaxTime (Sec)	Cycles	Unit Type
LM1894MX	1	235	30	4	Each

Document Date	Contains Lead(Pb) - NOT European RoHS Compliant. NOT China RoHS Compliant	Weight (mg)	Does NOT Contain Halogens (Flame Retardant Free)
4-May-2008		130.00	

Homogeneous Material Composition Declaration for Electronic Products

Item	Weight (mg)	Component	CAS#	Weight (mg)	Item-ppm	Part-ppm
Plastic	79.56	SiO2	60676-86-0	70.808	890,000	544,680
		Epoxy Resin	25928-94-3	6.365	80,000	48,960
		Mg(OH)2	1309-42-8	2.387	30,000	18,360
Leadframe	42.69	Cu	7440-50-8	41.601	974,500	320,011
		Fe	7439-89-6	1.025	24,000	7,881
		Zn	7440-66-6	0.051	1,200	394
		P	7723-14-0	0.013	300	99
Ext. LeadFinish	3.46	Sn	7440-31-5	2.941	850,000	22,623
		Pb	7439-92-1	0.519	150,000	3,992
Chip	3.25	Si	7440-21-3	3.231	994,000	24,850
		Al	7429-90-5	0.020	6,000	150
Die Attach	0.36	Ag	7440-22-4	0.270	750,000	2,077
		Epoxy Resin	25928-94-3	0.090	250,000	692
Wires	0.35	Au	7440-57-5	0.350	1,000,000	2,692
Int. LeadFinish	0.33	Ag	7440-22-4	0.330	1,000,000	2,538

Note: The device content disclosed herewith is approximate and is based on engineering estimates only. It has not been verified through analytical testing. Additionally, the following should be noted:

- One or more dopant materials may be present in the silicon die at sub-ppm levels to provide semiconductor properties.
- Epoxy resin components listed are generic and may or may not be the specific compound used, which is considered proprietary.

RoHS Material Composition Declaration

RoHS Directive 2002/95/EC	RoHS Definition: Quantity limit of 0.1% by mass (1000 PPM) in 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 for Cadmium
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Subject to the limitations below, National Semiconductor Corporation ("National") certifies the following information as of the document date.

- National products designated "ROHS Compliant" comply with the European Union's Directive on the Restriction of the Use of Hazardous Substances 2002/95/EC ("RoHS"). These products do not contain Joint Industry Guide (JIG) -101 Level A substances above threshold limits, except lead in RoHS exempt applications 5, 7a and 7c. These products do not contain perfluorooctane sulfonates (PFOS).
- National products are manufactured in conformance with National specifications (SC) CSP-9-111C1 Supplier Environmental Requirements for Materials and Products and (SC) CSP-9-111S2 List of Banned and Reportable Substances, which are available at www.national.com/quality/green/.

National has taken commercially reasonable steps to provide representative and accurate information but may not have independently verified information provided or conducted chemical analysis of incoming materials. Equivalent compliant materials may have been substituted for those stated herein. Material concentrations are the maximum expected concentration of the substances in the device and may not represent the actual concentration. National and its suppliers consider certain limited information to be confidential and thus CAS numbers and other limited information may not be available for release. National's Standard Terms and Conditions of Sale apply to any issues arising out of or in connection with the information provided herein unless otherwise provided by a written contract signed by both parties.

NATIONAL ACCEPTS NO DUTY TO NOTIFY USERS OF THIS DECLARATION OF UPDATES OR CHANGES TO THIS DECLARATION.

Gerry Fields
Vice President Quality



Banned Substance Monitoring

Part Number	Document Date
LM1894MX	4-May-2008

Contains Lead(Pb) - NOT European RoHS Compliant.

NOT China RoHS Compliant

Item#	Material	Cd	CrVI	Pb	Hg	PBB	PBDE	Cl	Br	Ref #
1	CHIP	<1	<1	<1	<30	<10	<10	NA	NA	1000
2	COMPOUND	<2	<5	<5	<1	<10	<10	<20	<20	637
3	EPOXY	<2	<5	<5	<1	<10	<10	160	<20	32
4	EXTLF	<2	<2	150000	<2	NA	NA	NA	NA	56
5	FRAME	0	0	0	0	0	0	0	0	53
6	WIRE	<2	<2	<2	<2	NA	NA	NA	NA	132

* Cd: Cadmium, CrVI: Hexavalent Chromium, Pb: Lead, Hg: Mercury, ND: Not Detected

* Unless otherwise noted, units are in PPM (parts-per-million)

Ref #	3rd Party Analysis (available upon request, subject to a non-disclosure agreement)
1000	Analysis on 02/13/2008 by Balazs Analytical Services-Fremont CA per Report# 08-00823-00
637	Analysis on 03/14/2008 by ALS per Report# ATJB/0791BS/2008
32	Analysis on 03/14/2008 by ALS per Report# ATJB/0807BS/2008
56	Analysis on 03/14/2008 by SGS per Report# LPCI/03627/08
53	#N/A
132	Analysis on 04/09/2008 by SGS per Report# LPCI/06217/08

产品名称 Product Name	LM1894MX
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部件名称 Part	有毒有害物质或元素 Toxic and harmful substances or elements					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr6+)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
集成电路 Integrated Circuit	X	○	○	○	○	○

○ : 表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T 11363-2006标准规定的限量要求以下。

○ : Indicates that this hazardous substance contained in all homogeneous materials of this part is below the limit requirement in SJ/T 11363-2006.

X : 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T 11363-2006标准规定的限量要求。

X : Indicates that this hazardous substance contained in at least one of the homogeneous materials of this part is above the limit requirement in SJ/T 11363-2006.

美国国家半导体的产品不会含有镉、汞、六价铬、多溴联苯(PBB)和二苯醚(PBDE)。

National Semiconductor's products will not contain cadmium, mercury, hexavalent chromium, polybrominated biphenyls (PBBs) and diphenyl ether (PBDE).



环保使用期限(epup) 是指以符号在这里展出. 环保使用期限(epup)的有效期只有当产品使用范围以内的数据表中的规格.

The Environmental Protection Use Period (EPUP) is defined by the symbol shown here. The Environmental Protection Use Period (EPUP) is valid only when product is used within the limits of the data sheet specifications.