Company		National Semiconductor	DUNS#	URL for Ac	dditional Information		
National Semiconductor		The Sight & Sound of Information	04-147-2986	http://www.na	<u>tional.com/qเ</u>	uality/green/	
Contact		Title	Phone		Email		
Steve Osborne	Product	Ecology Engineer	1-408-721-7838	<u>Green.</u>	<u>Project@nsc</u>	.com	
Part Number		MSL Rating	Peak Body Temp C	MaxTime (Sec)	Cycles	Unit Type	
LM360MX	NOPB	4	000	10			
LIVISOOIVIX	NUPD	Ĩ	260	40	4	Each	
Document Date		European RoHS Com		40 Weight (mg)	4	Each	

China RoHS Compliant

Homogeneous Material Composition Declaration for Electronic Products						
ltem	Weight (mg)	Component	CAS#	Weight (mg)	ltem-ppm	Part-ppm
Plastic	44.71	SiO2	60676-86-0	36.215	810,000	519,138
		Epoxy Resin	25928-94-3	7.243	162,000	103,828
		Sb2O3	1309-64-4	0.894	20,000	12,818
		Brominated Epoxy	40039-93-8	0.358	8,000	5,127
Leadframe	20.56	Cu	7440-50-8	20.036	974,500	287,209
		Fe	7439-89-6	0.493	24,000	7,073
		Zn	7440-66-6	0.025	1,200	354
		Р	7723-14-0	0.006	300	88
Chip	2.36	Si	7440-21-3	2.346	994,000	33,627
		Al	7429-90-5	0.014	6,000	203
Ext. LeadFinish	1.60	Sn	7440-31-5	1.600	1,000,000	22,936
Die Attach	0.27	Ag	7440-22-4	0.203	750,000	2,903
		Epoxy Resin	25928-94-3	0.068	250,000	968
Int. LeadFinish	0.18	Ag	7440-22-4	0.180	1,000,000	2,580
Wires	0.08	Au	7440-57-5	0.080	1,000,000	1,147

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:

1. One or more dopant materials may be present in the silicon die at sub-ppm levels to provide semiconductor properties.

2. 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 Definition: Quantity limit of 0.1% by mass (1000 PPM) in homogeneous material for: Lead (Pb), Mercurv, Hexavalent **RoHS Directive** Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE) and quantity limit of 0.01% by mass 2002/95/EC (100 PPM) of homogeneous material for Cadmium

Subject to the limitations below, National Semiconductor Corporation ("National") certifies the following information as of the document date.

1. 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).

2. 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/guality/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.

GATilds

Gerry Fields Vice President Quality

	Part Nu	umber	Document Date
Ī	LM360MX	NOPB	26-Apr-2008

## European RoHS Compliant.

## China RoHS Compliant

Item#	Material	Cd	CrVI	Pb	Hg	PBB	PBDE	CI	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	30	<2	NA	NA	NA	NA	595
5	FRAME	<2	<2	15	<2	NA	NA	N/A	N/A	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 (ava	ailable upon request, subject to a non-disclosure agreement)
1000	Analysis on 02/13/2008	by Balazs Analytical Services-Freemont 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
595	Analysis on 03/14/2008	by SGS per Report# LPCI/03628/08
53	Analysis on 03/13/2007	by SGS per Report# LPCI/05143/07
132	Analysis on 04/09/2008	by SGS per Report# LPCI/06217/08