


Company	 National Semiconductor <small>The Sight & Sound of Information</small>	URL for Additional Information
National Semiconductor		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
LM61BIM3X	NOPB	1	40	4

Document Date	European RoHS Compliant. China RoHS Compliant	Weight (mg)	Unit Type
17-Feb-2008		10.341	Each

Homogeneous Material Composition Declaration for Electronic Products

Item	Weight (mg)	Component	CAS#	Weight (mg)	Item-ppm	Part-ppm
Plastic	5.609	SiO2	60676-86-0	4.992	890,000	482,740
		Epoxy Resin	25928-94-3	0.449	80,000	43,392
		Mg(OH)2	1309-42-8	0.168	30,000	16,272
Leadframe	3.714	Cu	7440-50-8	3.619	974,500	349,994
		Fe	7439-89-6	0.089	24,000	8,620
		Zn	7440-66-6	0.004	1,200	431
		P	7723-14-0	0.001	300	108
Chip	0.450	Si	7440-21-3	0.447	994,000	43,255
		Al	7429-90-5	0.003	6,000	261
Ext. LeadFinish	0.395	Sn	7440-31-5	0.395	1,000,000	38,197
Die Attach	0.093	Ag	7440-22-4	0.070	750,000	6,745
		Epoxy Resin	25928-94-3	0.023	250,000	2,248
Int. LeadFinish	0.061	Ag	7440-22-4	0.061	1,000,000	5,899
Wires	0.019	Au	7440-57-5	0.019	1,000,000	1,837

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 with lead-free solder 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 homogeneous materials with Joint Industry Guide (JIG) -101 Level A materials above Level A threshold levels, except lead in RoHS exempt applications 5, 7a and 7c.
- National products with lead-containing solder do not comply with RoHS, because they contain lead in a non-exempt application. These products do not contain other RoHS restricted substances or homogeneous materials with JIG-101 Level A materials above Level A threshold levels, except lead in solder and RoHS exempt applications 5, 7a and 7c.
- 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 National's List of Banned and Reportable Substances, which are available at www.national.com/quality/green/.
- National products do not contain and are not manufactured with ozone depleting substances subject to The Montreal Protocol on Substances that Deplete the Ozone Layer and U.S. Clean Air Act, Title VI.

National has taken commercially reasonable steps to provide representative and accurate information but may not have independently verified information provided by others or conducted testing or chemical analysis on incoming materials and chemicals. Information provided in this document is derived from default values associated with internal process information and may not be representative of all or actual materials used in the product (e.g. the default may indicate a particular material, while an equivalent compliant material from the same or alternate supplier was actually used). Material concentrations are the maximum expected concentration of the substances in the device and may not represent the actual concentration. National and National 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 warranty and limitation of liability provisions of 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
LM61BIM3X NOPB	17-Feb-2008

European RoHS Compliant.

China RoHS Compliant

Use	Material	Cd	CrVI	Pb	Hg	PBB	PBDE	Ref #
Device	CHIP	<1	<1	<1	<1	<1	<1	1000
	COMPOUND	<2	<2	<2	<2	<100	<100	637
	EPOXY	<2	<5	<5	<1	<10	<10	32
	EXTLF	<2	<5	53	<1	<10	<10	595
	FRAME	<2	<2	<2	<2	NA	NA	500
	WIRE	<2	<5	<5	<1	<10	<10	75

* 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 04/17/2007 by Balazs Analytical Services-Fremont CA per Report# 07-01051-07
32	Analysis on 05/16/2007 by ALS per Report# ATJB/3488BS/2007
75	Analysis on 05/16/2007 by ALS per Report# ATJB/3490BS/2007
500	Analysis on 03/13/2007 by SGS per Report# LPCI/05150/07
595	Analysis on 05/16/2007 by ALS per Report# ATJB/3476BS/2007
637	Analysis on 06/04/2007 by SGS per Report# LPCI/10324/07