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

Contact	Title	Phone	Email
Lorena Dudman	Product Stewardship Eng. Mgr	1-408-721-8180	Green.Project@nsc.com

Part Number	MSL Rating	Peak Body Temp C	MaxTime(Sec)	Cycles	Unit Type
LMV431ACM5	1	260	40	4	Each

Document Date		Weight (mg)	
10-27-2011	Contains Lead(Pb) - NOT European RoHS NOT China RoHS Compliant.	14.80	Does NOT Contain Halogens

Material Composition Declaration for Electronic Products

Item	Weight (mg)	Component	CAS#	Weight (mg)	Item-ppm	Part-ppm
Plastic	7.473	SiO2	60676-86-0	6.651	890,000	449,362
		Epoxy Resin	25928-94-3	0.598	80,000	40,403
		Mg(OH)2	1309-42-8	0.224	30,000	15,134
Leadframe	5.579	Cu	7440-50-8	5.436	974,500	367,272
		Fe	7439-89-6	0.134	24,000	9,053
		Zn	7440-66-6	0.007	1,200	473
		P	7723-14-0	0.002	300	135
Ext. LeadFinish	0.805	Sn	7440-31-5	0.684	850,000	46,213
		Pb	7439-92-1	0.121	150,000	8,175
Chip	0.648	Si	7440-21-3	0.644	994,000	43,511
		Al	7429-90-5	0.004	6,000	270
Die Attach	0.215	Ag	7440-22-4	0.161	750,000	10,878
		Epoxy Resin	25928-94-3	0.054	250,000	3,648
Int. LeadFinish	0.054	Ag	7440-22-4	0.054	1,000,000	3,648
Wires	0.027	Au	7440-57-5	0.027	1,000,000	1,824

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 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

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 Unions Directive on the Restriction of the Use of Hazardous Substances 2002/95/EC ("RoHS"). Certain National products contain lead in RoHS exempt applications 7(a) or 7(c)-I.
2. National products do not contain and are not manufactured with ozone depleting compounds.
3. National products do not contain substances identified by the European Chemical Agency ("ECHA") as substances of very high concern ("SVHC") per REACH Regulation (EC) No 1907/2006. National also complies with use restrictions as stipulated in Annex XVII of REACH.
4. 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 Banned and Reportable Substances.
5. National's list of banned and reportable substances and management system is based on the current version of the Joint Industrial Guide, JIG-101.

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 substance 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. Nationals Standard Terms and Conditions of Sale apply to any issue 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.

John L Conn
Vice President Quality

John L. Conn
Vice President Quality

Banned Substance Monitoring

Part Number	Document Date
LMV431ACM5	10-27-2011

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	<75	<50	1000
2	COMPOUND	<2	<2	<2	<2	<5	<5	<50	<50	637
3	EPOXY	<2	<2	<2	<2	<5	<5	<50	<50	32
4	EXTLF	<2	N/D	147395	<2	<5	<5	<50	<50	56
5	FRAME	<2	N/D	7	<2	<5	<5	N/A	N/A	88
6	WIRE	<2	N/D	<2	<2	<5	<5	N/A	N/A	132

* Cd: Cadmium, CrVI: Hexavalent Chromuim, Pb: Lead, Hg: Mercury, NA: Not Applicable

* 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 01/24/2011 by Balazs as per Report# 11-00322-00
637	Analysis on 04/29/2011 by SGS per Report# LPCI/04381(B)/11
32	Analysis on 04/29/2011 by SGS per Report# LPCI/04433(B)/11
56	Analysis on 04/29/2011 by SGS per Report# LPCI/04326(B)/11
88	Analysis on 04/29/2011 by SGS per Report# LPCI/04330(B)/11
132	Analysis on 04/29/2011 by SGS per Report# LPCI/04465(B)/11

美国国家半导体

National Semiconductor

《电子信息产品污染控制管理办法》的声明

"Electronic Information Products Pollution Control Measures" Statement

China RoHS Declaration

	有毒有害物质或元素 Toxic and harmful substances or elements					
部件名称 Part	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	O	O	O	O	O

O：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。**

O：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.