

 <small>ASSOCIATION CONNECTING ELECTRONICS INDUSTRIES®</small>	Material Composition Declaration Copyright 2005. IPC, Bannockburn, Illinois. All rights reserved under both international and Pan-American copyright conventions.	This document is a declaration of the substances within the manufacturer listed item. Note: if the item is an assembly with lower level parts, the declaration encompasses all lower level materials for which the manufacturer has engineering responsibility.								
1752-2 1.1	IPC Web Site for Information on IPC-1752 Standard http://www.ipc.org/IPC-175x	Form Type * Distribute	Declaration Class * Class 6 - RoHS Yes/No, Homogeneous Materials and Mfg Information							
Supplier Information										
Company Name * National Semiconductor	Company Unique ID NATSEMI	Unique ID Authority 04-147-2986	Response Date * 07-21-2011			Response Document ID				
Contact Name * Lorena Dudman	Title - Contact Product Stewardship Eng.	Phone - Contact * 1-408-721-8180	Email - Contact * Green.Project@nsc.com							
Authorized Representative * Lorena Dudman	Title - Representative Product Stewardship Eng.	Phone - Representative * 1-408-721-8180	Email - Representative * Green.Project@nsc.com			Supplier Comments or URL for Additional Information http://www.national.com/analog/quality/green				
Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	Weight *	UOM	Unit Type		
	LM117HVK-MLS MCP0820E	LM117HVK-MLS MCP0820E	07-21-2011			12290.87	mg	Each		
Alternate Recommendation				Alternate Item Comments						
Manufacturing Process Information										
Terminal Plating / Grid Array Material SnPb	Terminal Base Alloy Other	J-STD-020 MSL Rating 1	Peak Process Body Temperature 260 C	Max Time at Peak Temperature 40 seconds	Number of Reflow Cycles 4					
Comments "Does not contain PFOS."										

RoHS Material Type Declaration		Declaration Type * Custom	
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		
<p>Subject to the limitations below, National Semiconductor Corporation ("National") certifies the following information as of the document date.</p> <ol style="list-style-type: none"> 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 7a or 7(c)-1. 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. <p>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. National's 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.</p> <p>NATIONAL ACCEPTS NO DUTY TO NOTIFY USERS OF THIS DECLARATION OF UPDATES OR CHANGES TO THIS DECLARATION</p>			
RoHS Declaration *	2 - Item(s) contains RoHS restricted substances per the definition above and is not under exemption	Supplier Acceptance *	Accepted
<p>Exemptions: If the declared item does not contain RoHS restricted substances per the definition above except for defined RoHS exemptions, then select the corresponding response in the RoHS Declaration and above and choose all applicable exemptions.</p>			
Declaration Signature			
Supplier Signature	 John L. Conn Vice President Quality		
	John L. Conn Vice President Quality		

Homogeneous Material Composition Declaration for Electronic Products

Item/SubItem Name	Homogeneous Material	Weight	Unit of Measure	Level	Substance Category	Substance	CAS	Exempt	Weight	Unit of Measure	Tolerance	PPM
	Tab	90.000	mg	Requester		Mo	7439-98-7		90.000	mg		1,000,000
	Base	7510.000	mg	Requester		Fe	7439-89-6		7461.936	mg		993,600
				Requester		Mn	7439-96-5		33.795	mg		4,500
				Requester		C	7440-44-0		7.510	mg		1,000
				Requester		S	63705-05-5		3.755	mg		500
				Requester		P	7723-14-0		3.004	mg		400
	Chip	4.950	mg	Requester		Si	7440-21-3		4.920	mg		994,000
				Requester		Al	7429-90-5		0.030	mg		6,000
	Ext. LeadFinish	4.810	mg	Requester		Sn	7440-31-5		3.030	mg		630,000
				Requester		Pb	7439-92-1		1.780	mg		370,000
	Glass	23.000	mg	Requester		SiO2	60676-86-0		18.538	mg		806,000
				Requester		B2O3	1303-86-2		2.990	mg		130,000
				Requester		Na2O	12401-86-4		0.920	mg		40,000
				Requester		Al2O3	1344-28-1		0.552	mg		24,000
	Heat Sink	2210.000	mg	Requester		Cu	7440-50-8		2210.000	mg		1,000,000
	Lid	2198.000	mg	Requester		Ni	7440-02-0		2198.000	mg		1,000,000
	Plating	130.000	mg	Requester		Ni	7440-02-0		122.889	mg		945,300
				Requester		Au	7440-57-5		7.111	mg		54,700
	Leads	120.000	mg	Requester		Ni	7440-02-0		62.400	mg		520,000
				Requester		Fe	7439-89-6		57.600	mg		480,000
	Wires	0.106	mg	Requester		Al	7429-90-5		0.106	mg		1,000,000